SONY

NTSC

# DSR Series

DVCAM™

# DVCAM—
# Digital Innovation in

*Since its launch in 1996, DVCAM™ technology has brought many notable benefits to video professionals. The outstanding picture quality, superb multigeneration recording and extended recording time for up to three hours are some of key advantages of working with DVCAM products. Additionally, the DVCAM format offers excellent playback capability with the consumer DV format.*

*Based on the DVCAM format, the Sony DSR Series of recorders and camcorders offers many advantages: high performance editing capability, compact shooting packages, system versatility, excellent digital interfacing and a professional standard of reliability.*

# Video Production

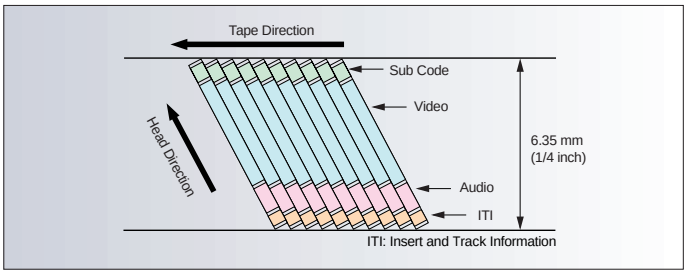
*Now many new models have been added to the DSR Series to broaden its range of applications such as field acquisition/editing, simple editing, PC-based editing, dubbing and transmission.*

*Select from the Sony DSR Series and you will have chosen innovative equipment that will bring both new solutions to your production demands and performance benefits to your system.*

# The DVCAM Format

### *Excellent Picture Quality via Digital Component Recording*

The DVCAM format uses 8-bit digital component recording with a 5:1 compression ratio same as the DV format and a sampling rate of 4:1:1 to provide excellent picture quality and superb multigeneration performance.
The DVCAM format is based on an intra-frame compression scheme which is ideal for editing applications. Based on DCT (Discrete Cosine Transform) techniques, each frame consists of 10 tracks. Each track has video, audio, ITI (Insert and Track Information) and sub code areas. ITI, which is a reference signal used for precise tracking, together with time code on the sub code area assure highly accurate editing performance. This technology provides much greater operational flexibility and facilitates complex multi-layering effects.




### *High Quality Digital Audio*

The DVCAM format also has superior digital audio performance, with a wide dynamic range and an excellent signal-to-noise ratio that is comparable to CD quality audio. There are two selectable audio channel modes: a two-channel mode with 48 kHz/16-bit recording or a four-channel mode with 32 kHz/12-bit recording.

### *Playback Compatibility with the DV Format*

The DVCAM format is a professional version of the consumer DV format, maintaining playback compatibility. All DVCAM equipment is capable of playing back DV recorded* tapes without any adaptor. A wider track pitch of 15 µm (compared with 10 µm for consumer DV) gives the DVCAM format higher reliability for professional editing.

* SP mode only

# Unique Technologies and

### *High-speed Data Transfer* DSR-85

The advanced drum mechanism and SDTI(QSDI™) interface enable degradation-free data transfer and dubbing at four times normal speed between the DSR-85 VTR and the Sony ES-7 EditStation™ system, or between two DSR-85 VTRs.
This brings a remarkable reduction in the time-consuming uploading and dubbing process, without loss of picture and sound quality.

### *Versatile Digital Interfaces*

### *•SDTI(QSDI)** DSR-85 DSR-80 DSR-60 DSR-70

The SDTI(QSDI) is a digital interface which handles compressed video as well as the sub code data and digital audio signals of the DVCAM format. It allows virtually degradation-free transfer of both video and audio signals between DSR Series VTRs that have an SDTI(QSDI) I/O, and between these VTRs and the ES-7 EditStation system in a non-linear editing configuration. The SDTI(QSDI) interface ensures that high quality pictures and sound are maintained during these operations.

* SDTI (Serial Data Transport Interface) is defined in SMPTE 305M.
SDTI(QSDI) is the DV signal interface which conforms to the SDTI standard.
The DSR-60 and DSR-70 VTRs require optional boards for SDTI(QSDI) operation.

### *•SDI** DSR-85 DSR-80 DSR-60 DSR-70

SDI (Serial Digital Interface) is the broadcast standard digital interface. With just a single digital connection, high quality pictures and sound can be transferred between DSR Series VTRs with an SDI I/O, and SDI-equipped devices such as D-1, Digital BETACAM™ and Betacam SX™ VTRs.

* The DSR-85/80/60/70 require optional boards for SDI operation. These optional boards support digital component video signals.

### *•i.LINK™* (DV In/Out)*

DSR-200A DSR-PD100 DSR-PD1 DSR-30 DSR-20 DRV-1000 DSR-70** DSR-V10

i.LINK is a digital interface based on the IEEE1394 standard. It offers digital dubbing of video, audio and data, with virtually no deterioration of image and sound quality and with the simplicity of a single wire connection between equipment.

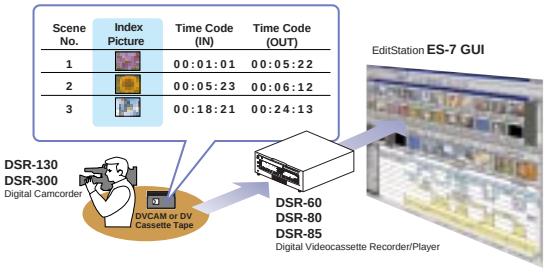
* i.LINK stands for IEEE1394-1995 standards and their revisions. i is the logo for products that implement i.LINK.

** The DSR-70 requires an optional board for i.LINK (DV In/Out) operation.

### *ClipLink™ Operation*

DSR-130 DSR-300 DSR-85 DSR-80 DSR-60 DSR-70

ClipLink is a unique Sony system which conveys shooting data into the digital production process. During acquisition with the DSR-130 or DSR-300 Camcorder, the time code data of the in-point and out-point of each shot is recorded in the Cassette Memory of the DVCAM tape. At the same time, a still frame of each in-point, called the 'Index Picture', is recorded on the DVCAM tape to provide visual information associated with the time code. When a cassette is loaded into the DSR-85, DSR-80, DSR-60 or DSR-70 VTR interfaced with the Sony EditStation system, all of its shot log information is loaded into an EditStation system and appears on the display. This visual information enables users to quickly select the shots they need to upload to the hard disk of an EditStation.



| | | DVCAM | Consumer DV | |
|---|---|---|---|---|
| | | | SP mode | LP mode |
| **Video** | Video signal format | Digital component | | |
| | Sampling frequency | Y:13.5 MHz C: 3.375 MHz | | |
| | Quantization | 8-bit | | |
| | Compression ratio | 5 : 1 | | |
| | Compression type | Intra-frame | | |
| | Sampling structure | 4 : 1 : 1 | | |
| | Video transfer rate | 25 Mbps | | |
| **Audio** | Audio signal format | PCM | | |
| | Audio recording channels | 2 CH or 4 CH | | |
| | Sampling frequency | 2CH: 48 kHz, 4CH: 32 kHz | 2CH: 48 kHz / 44.1 kHz, 4CH: 32 kHz | |
| | Quantization | 2CH: 16-bit, 4CH: 12-bit | | |
| **Tape** | Tape material | Metal Evaporated or equivalent | | |
| | Tape width | 1/4 inch (6.35 mm) | | |
| | Tape track pitch | 15 µm | 10 µm | 7 µm |
| | Tape speed | 28.193 mm/s | 18.8 mm/s | 12.6 mm/s |
| | Cassette size | Standard size / Mini size | | |
| | Maximum recording time | 184 min. (standard size)<br>40 min. (mini size) | 270 min. (standard size)<br>60 min. (mini size) | 405 min. (standard size)<br>90 min. (mini size) |

## *Excellent Performance from Professional DVCAM Tapes*

To gain maximum performance from high density digital recording, advanced Metal Evaporated tape technology has been developed for the DVCAM format. The use of Sony's pure cobalt advanced evaporated coating gives both high output and high C/N (Carrier-to-Noise) ratio, resulting in superb quality pictures and a low error rate. DLC (Diamond Like Carbon) protective layer provides the enhanced protection of the tape surface which is essential to avoid the possibility of damage during long editing sessions. Finally, DVCAM tape provides a low frequency of dropouts and superior thermal stability. Cassettes are available with or without an IC Cassette Memory.
This 16 kbit Cassette Memory stores ClipLink Log Data and Index Pictures which can enhance editing efficiency.

## *Up to Three-hour Recording Capability*

DVCAM video cassette tapes are available in two sizes: standard and mini.
Recording time of up to 184 minutes is provided with a standard size cassette and up to 40 minutes with a mini size cassette. These long recording times are achieved in very compact cassettes with a tape width of only 1/4 inch (6.35 mm).

* The DSR-200A Camcorder accepts a standard size cassette only.
The DSR-PD100 Camcorder, the DSR-PD1 Camcorder, the DSR-V10 DVCAM Video Walkman® Recorder and the DRV-1000 DVCAM Drive accept a mini size cassette only.

# Advantages

## *Remote Control Interfaces for High Performance Editing*

### *•RS-422A*

DSR-85 DSR-80 DSR-60 DSR-70

An RS-422A remote control interface is used for professional editing. It allows for these VTRs to interface not only with the EditStation system but also with Sony VTRs and editing controllers that have the same interface. RS-422A is also used to transfer ClipLink Log Data from the DVCAM Cassette Memory to the EditStation system.

### *•LANC*

DSR-200A DSR-PD100 DSR-PD1 DSR-30 DSR-20 DRV-1000 DSR-V10

A LANC interface makes it easy to perform simple edits using other LANC-based devices including consumer DV products that have high editing accuracy (±5 frames).

## *Full Compatibility with Analog Equipment*

### *•Analog Interfaces*

DSR-85 DSR-80 DSR-60 DSR-30 DSR-20 DSR-70 DSR-V10

The DSR Series is compatible with current analog video equipment. With analog interfaces for both video and audio, the DSR Series VTRs interface with conventional analog equipment such as Betacam SP®, S-VHS and Hi-8 VTRs, facilitating a smooth and gradual migration to a future digital system. Composite, component* and S-Video connections are provided for video. Four channel or two channel (selectable) inputs and outputs are provided for audio.

* The DSR-30, DSR-20 and DSR-V10 are not equipped with a component interface.
The DSR-70 requires an optional board for analog component.

### *•Dual Interface Mechanism* DSR-1

The DSR-1 Dockable Recorder has both Pro 76-pin Digital and Pro 50-pin connectors. These connections allow direct connection with several alternative Sony digital and analog cameras:
DXC-D30, DXC-D30WS, DXC-637, DXC-537, DXC-537A, DXC-327A and DXC-327B. This feature allows the DSR-1 to be configured with a variety of different cameras to suit particular applications.

Pro 76-pin Digital Pro 50-pin

## *Dual-size Cassette Mechanism*

DSR-130 DSR-300 DSR-1 DSR-85 DSR-80 DSR-60 DSR-30 DSR-20 DSR-70

The above VTRs and camcorders all have a dual-size cassette mechanism which accepts both standard and mini size cassettes without any adaptor.
In the case of the DSR-1, this is a technological first for professional camcorders.

# The Total Line-up for Highly Efficient Digital Production

## For Acquisition

DVCAM™


DSR-130


DSR-300


DSR-1


DSR-200A


DSR-PD100


DSR-PD1

## For Field Operation


DSR-70


DSR-V10

## For Video Production


DSR-85


DSR-80


DSR-30


DSR-60


DSR-20


DRV-1000

## For Transmission

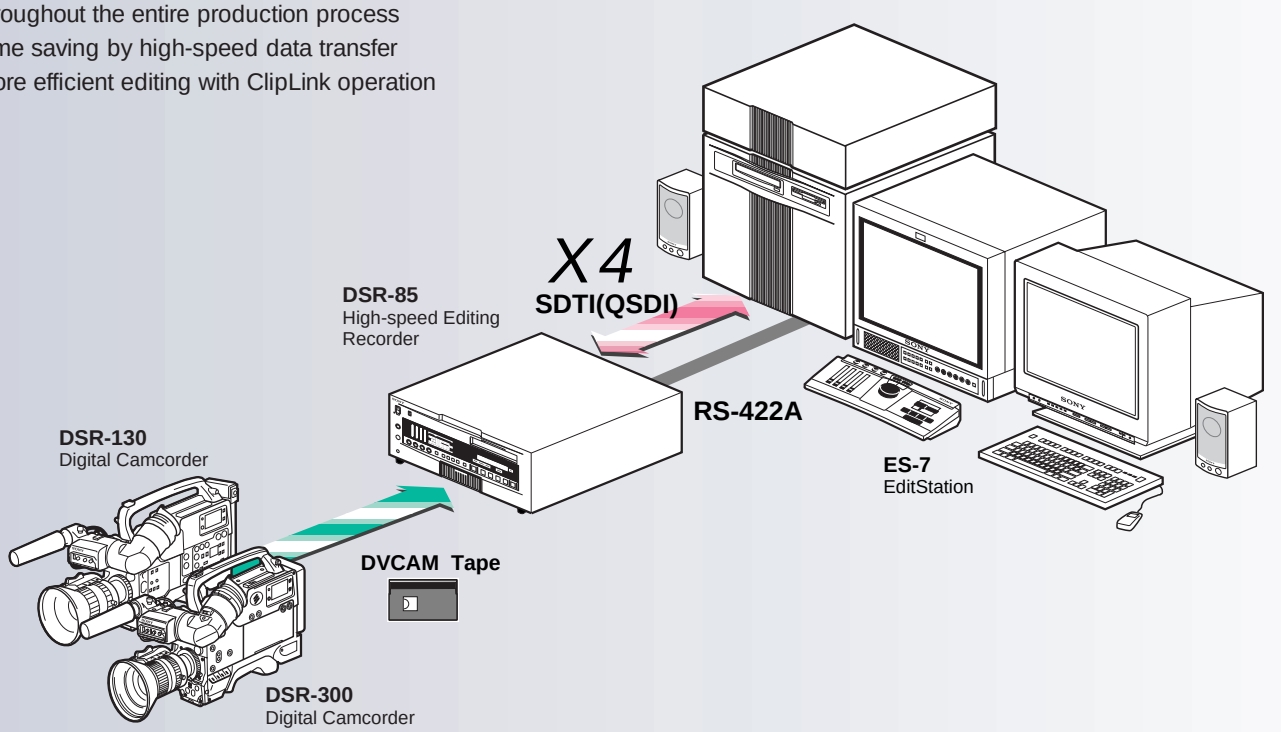

Flexicart

From Acquisition through Editing to Transmission—
The Entire Digital Chain

# Application Examples

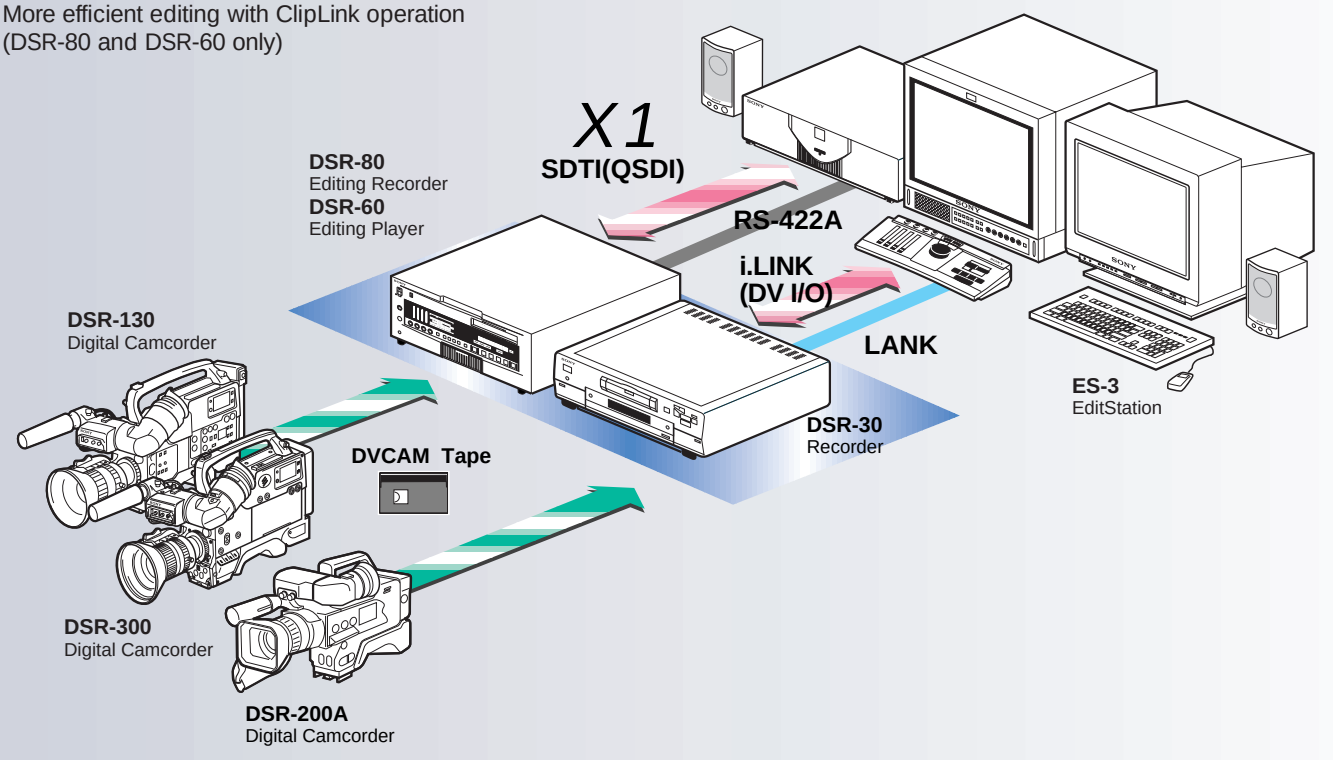
## High-speed Nonlinear Editing System

- Degradation-free picture and sound quality by using SDTI(QSDI) interfacing throughout the entire production process
- Time saving by high-speed data transfer
- More efficient editing with ClipLink operation




## Efficient Nonlinear Editing System

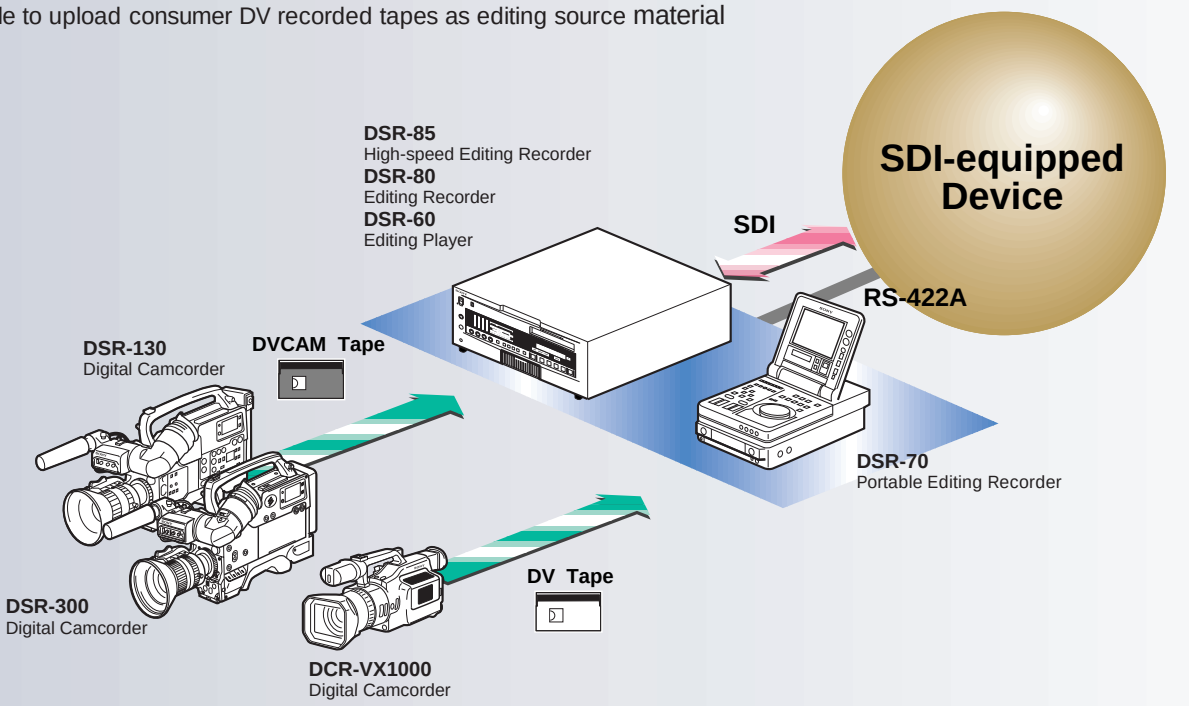
- Superior multigeneration picture and sound quality by using SDTI(QSDI) or i.LINK(DV In/Out) interfacing
- More efficient editing with ClipLink operation (DSR-80 and DSR-60 only)



# Application Examples

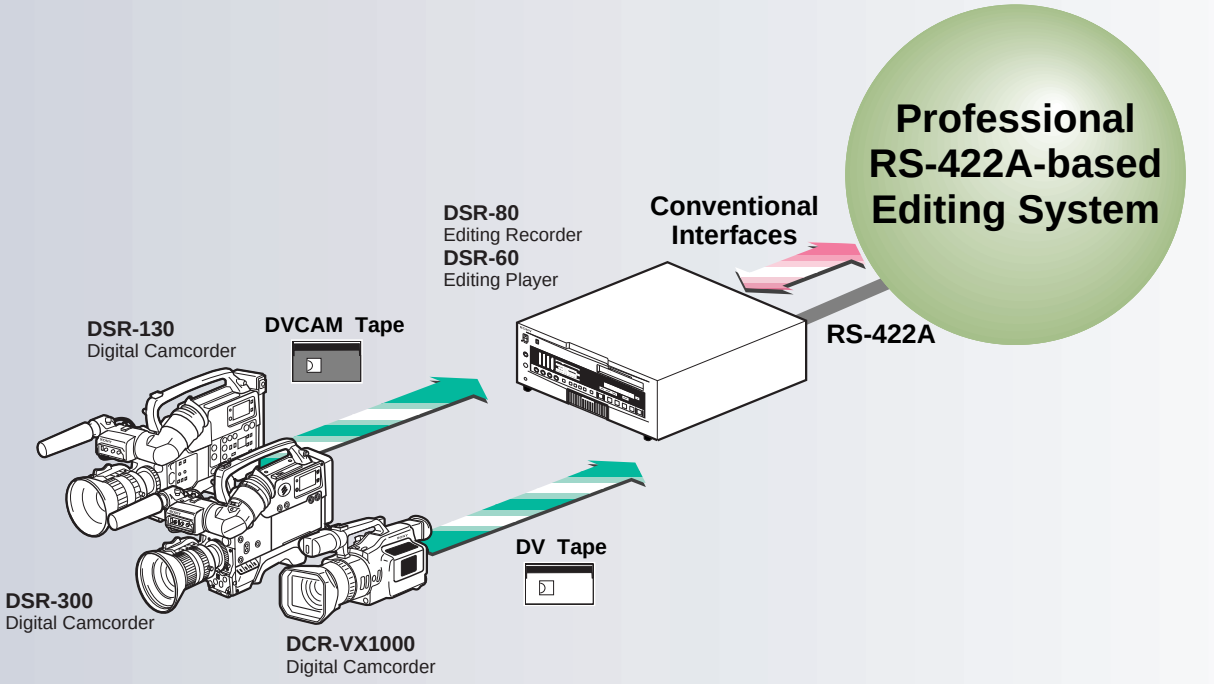
## Upwardly Compatible Editing System

- Direct digital connection with SDI-equipped device
- Upward compatibility with the broadcasting system
- Possible to upload consumer DV recorded tapes as editing source material



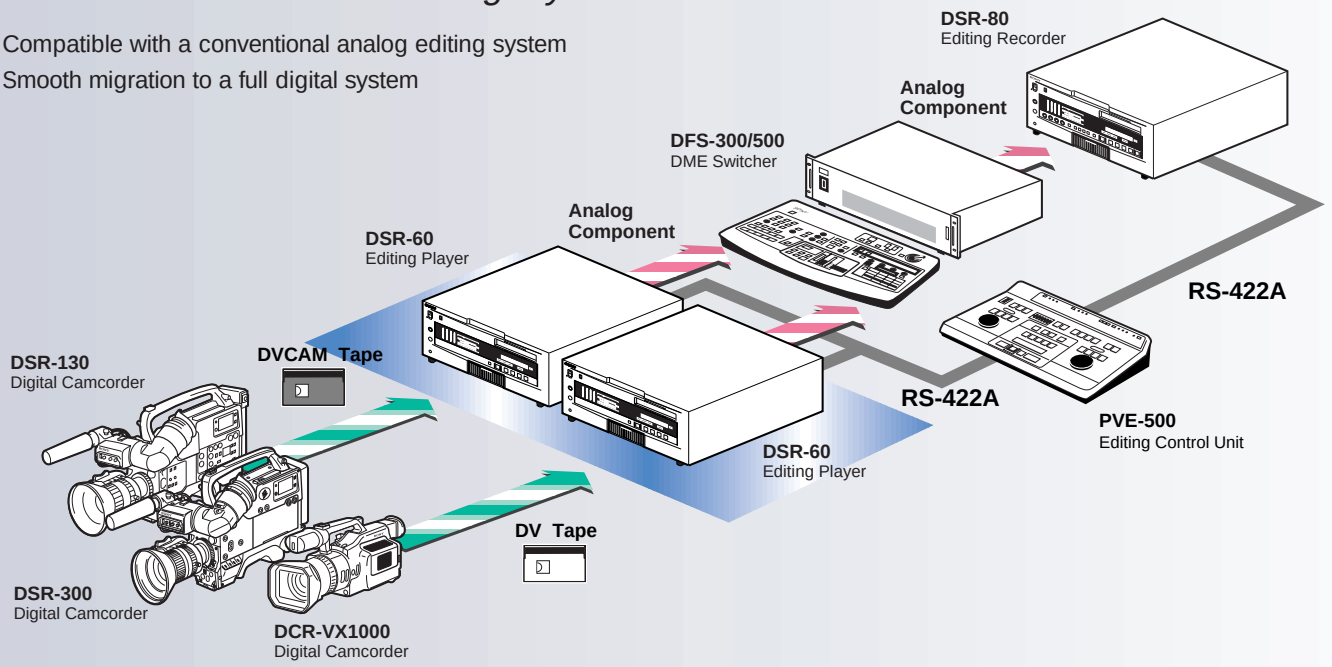

## Linear Editing System

- Improvement in picture quality by adding digital acquisition
- First step to a digital system



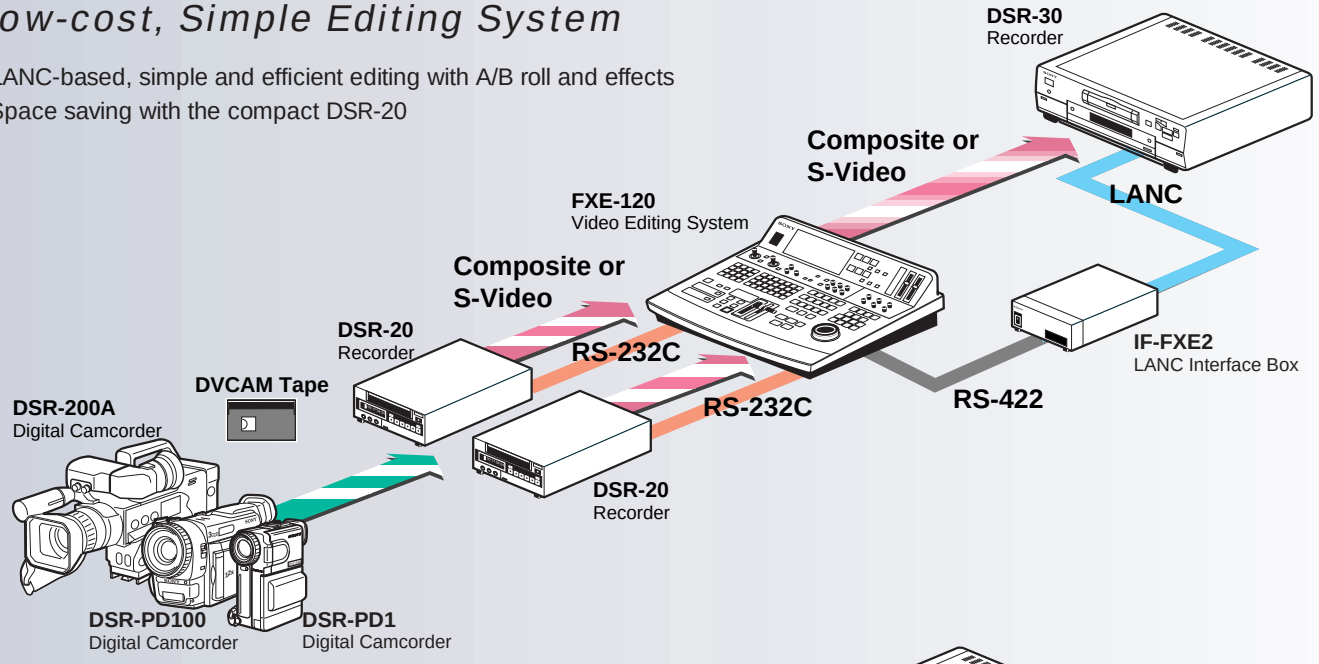
## *Full DVCAM Linear Editing System*

- Compatible with a conventional analog editing system
- Smooth migration to a full digital system

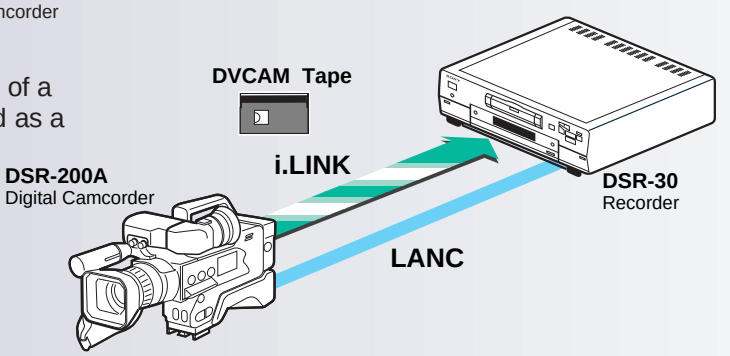



## *Low-cost, Simple Editing System*

- LANC-based, simple and efficient editing with A/B roll and effects
- Space saving with the compact DSR-20



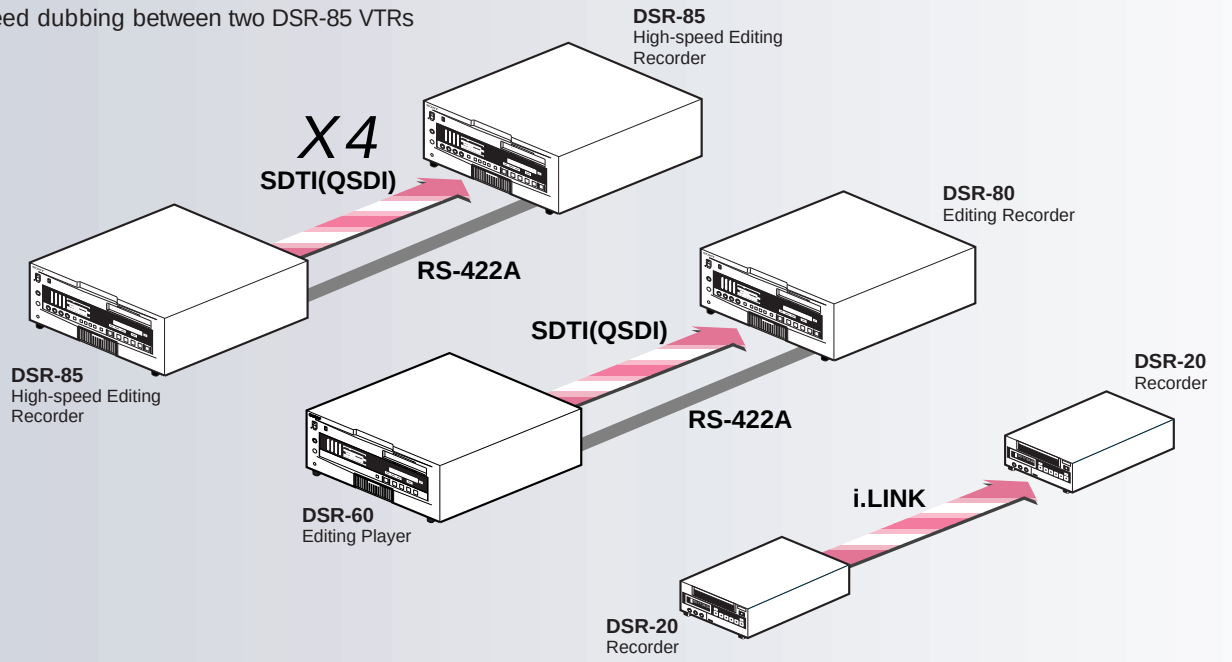

- Simple and efficient editing by use of a camcorder both for acquisition and as a feeder



# Application Examples

## Digital Dubbing System

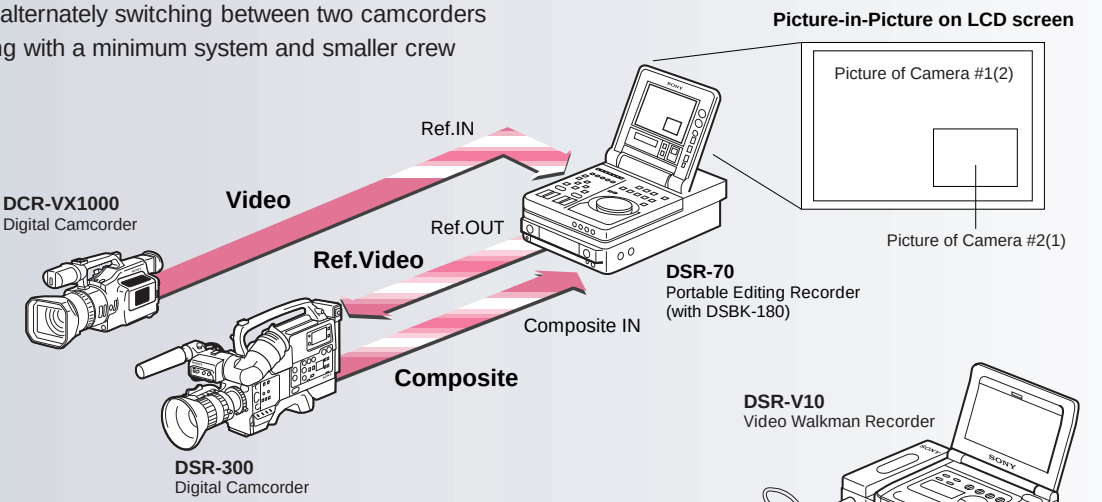
- Simple dubbing system that does not require an additional controller
- Degradation-free dubbing quality by using SDTI(QSDI) or i.LINK (DV In/Out) interfacing
- High-speed dubbing between two DSR-85 VTRs




## Field Operation System

### ■ Two-camera Switching Recording System

- Flexible recording by alternately switching between two camcorders
- Ideal for field recording with a minimum system and smaller crew

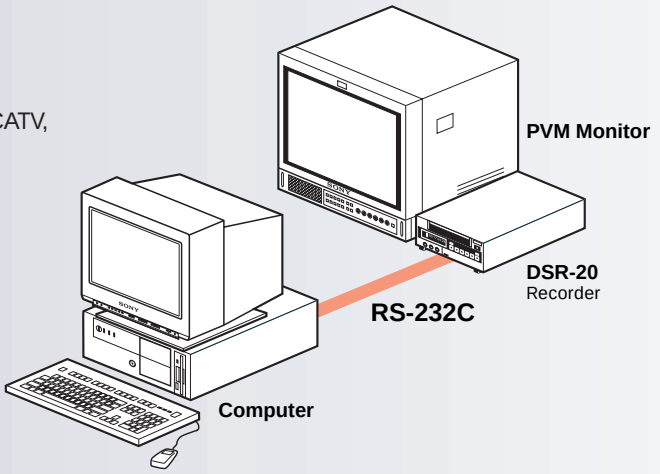



### ■ Simple Field Editing System

- Compact and portable system
- Assemble editing with up to 99 events x four programs

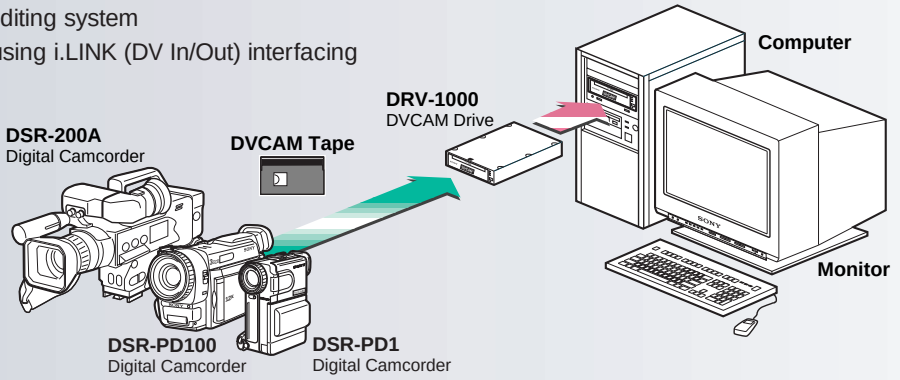
## PC Control System

- Simple system using PC control
- Ideal for automatic program transmission in CATV, corporate communication, etc.



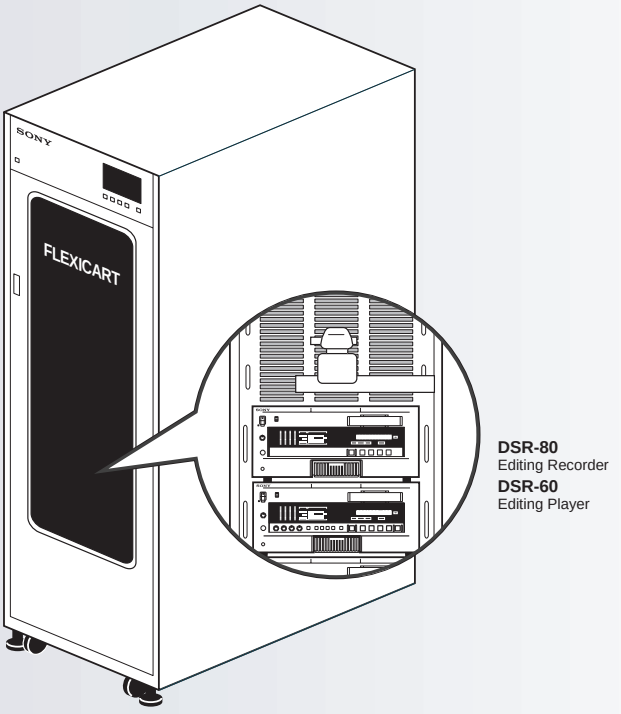

## PC-based Editing System

- Low-cost, PC-based editing system
- Full digital editing by using i.LINK (DV In/Out) interfacing




## Flexicart™ System

- Outstanding picture and sound quality by maintaining the signal in the same digital format from acquisition to transmission



# DSR-130

**Two-piece Camcorder**

- Combination of the DXC-D30 Digital Video Camera and the DSR-1 Dockable Recorder, equivalent to one-piece camcorder
- Compact and lightweight: 7.3 kg (16 lb 2 oz) including a viewfinder, microphone, lens, battery, tape and carrying handle
- DSP (Digital Signal Processing)
- Three 2/3-inch Power HAD™ CCDs for low smear level, high sensitivity and high S/N ratio
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- ClipLink operation
- TruEye™ process for faithful color reproduction
- DynaLatitude™ feature
- Skin Detail with skin tone detection
- Black halo-free, Clean Detail
- Camera Setup File system
- SetupNavi™ function for Camera Setup File storage
- SetupLog™ function for automatic recording of camera setting data
- Total Level Control System (TLCS) for automatically extended range of light control
- EZ Focus and EZ mode for quick camera setup
- Auto Tracing White Balance (ATW) function
- Adjustable Black Stretch and Compress
- Dual Zebra viewfinder indication of over exposure
- Time code superimposed during playback
- Edit Search function
- Freeze Mix function

# DSR-1

**Dockable Recorder**

- Compact and lightweight: 2.85 kg (6 lb 4 oz) including battery
- Perfect camcorder operation by docking with the DXC-D30 Digital Video Camera
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- Dual-size cassette mechanism: both standard cassettes and mini cassettes accepted
- ClipLink operation
- Dual interface mechanism: Pro 76-pin Digital and Pro 50-pin interfaces for direct connection with both Sony digital and analog cameras
- Full color picture playback capability without any playback adaptor
- Record review function
- Frame accurate back space editing
- Built-in SMPTE time code generator/reader
- Time base stabilizer
- Full VTR function control (Fast Forward/Rewind/Play/Stop/Eject)
- Comprehensive 8-digit LCD

# DSR-300

**One-piece Camcorder**

- Highly mobile one-piece design
- Compact and lightweight: 5.7 kg (12 lb 9 oz) including viewfinder, microphone, lens, battery and tape
- Compact crew package with the LC-300SFT Soft Carrying Case
- DynaFit™ shoulder pad for comfortable molding to any shoulder
- DSP (Digital Signal Processing)
- Three 1/2-inch Power HAD™ CCDs for low smear level, high sensitivity and high S/N ratio
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- ClipLink operation*1
- RM-VJ1 Remote Control Unit with a professional microphone and a hand-held LCD screen for a one-person operation
- TruEye™ process for faithful color reproduction
- DynaLatitude™ feature
- Skin Detail with skin tone detection
- SetupLog™ function for automatic recording of camera setting data
- Total Level Control System (TLCS) for automatically extended range of light control
- EZ Focus and EZ mode for quick camera setup
- Auto Tracing White Balance (ATW) function
- Adjustable Black Stretch and Compress
- Dual Zebra viewfinder indication of over exposure
- Video light connection for Anton Bauer® Ultra Light 2
- Menu control by Jog Dial operation
- Time code superimposed during playback
- Edit Search function
- Freeze Mix function
- 26-pin VTR interface connection
- Compact and lightweight BP-L40 Lithium-ion Battery
- CA-WR855 Camera Adapter for the WRR-855A Wireless Receiver

*1 The optional DSBK-301 Index Picture Board is required.

# DSR-200A

**One-piece Camcorder**

- Compact and lightweight: 4.7 kg (10 lb 8 oz) including tape and battery holder with three battery packs
- DSP (Digital Signal Processing)
- Three 1/3-inch CCDs for accuracy of color reproduction
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette*1
- Long operating time; up to 450 minutes with three NP-F950 Battery Packs (fully charged)
- Optical SteadyShot® function for stable picture shooting without sacrificing picture quality
- Time/date data superimposition on output pictures
- Easy-to-use viewfinder, with high horizontal resolution
- Photo mode and frame interpolation for recording a clear frame picture for seven seconds
- Audio dubbing capability (32 kHz/12-bit only)
- Time code capability
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- 16:9 aspect ratio capability
- LANC interface for simple editing with a LANC-based recorder or editing system
- RMT-806 Remote Controller (supplied) for control of basic functions

*1 The DSR-200A accepts only standard DVCAM and DV cassettes.

# DSR-PD100

**Handycam®-style Camcorder**

- Compact and lightweight: 1 kg (2.2 lbs) including tape and battery
- DSP (Digital Signal Processing)
- 1/4-inch CCD with the capability to switch to scan in two ways: Interlace Scan and Progressive Scan
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- 40 minutes recording time with a mini cassette*1
- Super SteadyShot® function for stable picture shooting without sacrificing picture quality
- Extreme close-up shots with 48x digital and 12x optical zoom
- Color 3.5-inch LCD monitor
- InfoLITHIUM™ system; Lithium-ion battery power system which shows the amount of power remaining in the battery, to within one minute accuracy
- Two way of still image recording: Tape photo mode by using a tape and Memory photo mode by using a removable memory media (Memory Stick™)
- Switchable 4:3 and 16:9 recording modes
- Manual control and full range auto modes
- Audio dubbing capability (32 kHz/12-bit only)
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system
- RMT-811 Wireless Remote Commander (supplied)
- Wide angle conversion lens (supplied)
- XLR adaptor for connecting external professional microphones

*1 The DSR-PD100 accepts only mini DVCAM and DV cassettes.

# DSR-PD1

**Compact Camcorder**

- Compact and handy: 520 g (1.2 lb)
- 1/3-inch CCD
- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- 40 minutes recording time with a mini cassette*1
- Super SteadyShot® function for stable picture shooting without sacrificing picture quality
- Extreme close-up shots with 20x digital and 10x optical zoom
- 2 1/2-inch Swivelscreen™ color LCD advanced viewfinder
- InfoLITHIUM™ system; Lithium-ion battery power system which shows the amount of power remaining in the battery, to within one minute accuracy
- Photo mode for high quality still images
- A/V digital fade-to-black/silence function
- Audio dubbing capability (32 kHz/12-bit only)
- Time code capability
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system

*1 The DSR-PD1 accepts only mini DVCAM and DV cassettes.

# DSR-85

## High-speed Editing Recorder

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- High-speed data transfer and full tape dubbing via SDTI(QSDI) interface
- ClipLink operation
- Versatile digital interfaces: SDTI(QSDI), SDI*1 and AES/EBU digital audio
- Extensive analog interfaces: composite, component and S-Video
- Frame accurate editing capability
- RS-422A remote control interface
- Built-in SMPTE time code generator/reader
- Time base corrector
- High-speed picture search over a range of 32 times normal speed, in both forward and reverse
- Digital slow function over a range of 0 to 0.25 times normal speed, in both forward and reverse
- Jog audio over a range of 1/30 to 1 times normal speed, in both forward and reverse
- Newly developed digital laminated head for high quality and reliability
- SIRCS (Sony Integrated Remote Control System) interface for DSRM-10 Remote Control Unit

*1 The optional DSBK-120 SDI Input/Output Board is required.

# DSR-80

## Editing Recorder

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- ClipLink operation
- Full tape dubbing with ClipLink Log Data
- Versatile digital interfaces: SDTI(QSDI), SDI*1 and AES/EBU digital audio
- Extensive analog interfaces: composite, component*2, RGB*2 and S-Video
- Frame accurate editing capability
- RS-422A remote control interface
- Built-in SMPTE time code generator/reader
- Time base corrector
- High-speed picture search over a range of 32 times normal speed, in both forward and reverse
- Digital slow function over a range of 0 to 0.39 times normal speed, in both forward and reverse
- Jog audio over a range of 1/30 to 1 times normal speed, in both forward and reverse
- Closed caption function
- SIRCS (Sony Integrated Remote Control System) interface for DSRM-10 Remote Control Unit

*1 The optional DSBK-120 SDI Input/Output Board is required.
*2 Selectable by a switch on the rear panel

# DSR-60

**Editing Player**

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- ClipLink operation
- Versatile digital interfaces: SDTI(QSDI)*1 and SDI*2
- Extensive analog interfaces: composite, component*3, RGB*3 and S-Video
- Frame accurate editing capability
- RS-422A remote control interface
- Built-in SMPTE time code reader
- Time base corrector
- High-speed picture search over a range of 32 times normal speed, in both forward and reverse
- Digital slow function over a range of 0 to 0.33 times normal speed, in both forward and reverse
- Jog audio over a range of 1/30 to 1 times normal speed, in both forward and reverse
- Auto repeat/power-on playback function
- Closed caption function
- SIRCS (Sony Integrated Remote Control System) interface for DSRM-10 Remote Control Unit

*1 The optional DSBK-110 QSDI Output Board is required.
*2 The optional DSBK-100 SDI Output Board is required.
*3 Selectable by a switch on the rear panel

# DSR-30

**Recorder**

- Superb picture quality of the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system
- Auto repeat function
- One-program playback function to automatically rewind to the beginning of a tape and enter Standby mode
- Power-on playback/recording capability
- External timer recording
- Duplication mode with original time code
- Function lock to avoid accidental operation
- Built-in control tray with a Jog/Shuttle dial with a range of 1/5 to 15 times normal speed, in both forward and reverse
- Index/Photo/Date search functions (when using a cassette with IC Cassette Memory)
- Clear frame picture
- RMT-DS30 Wireless Remote Controller (supplied) for control of basic functions
- Headphone/microphone connections

# DSR-20

**Recorder**

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system
- Auto repeat function
- Power-on playback/recording capability
- External Sync*1 In connector for synchronized playback
- RS-232C and Control S interfaces for remote control operation
- Duplication mode with original time code
- Compact and lightweight (half-rack width)
- AC/DC operation
- Index/Photo/Date search functions (when using a cassette with IC Cassette Memory)
- RMT-DS20 Wireless Remote Controller (supplied) for control of basic functions

*1 The DSR-20 locks to H-sync or V-sync.

# DRV-1000

**DVCAM Drive**


- Superb picture quality for the DVCAM format
- Designed to fit directly into a standard PC 5.25-inch disk drive bay
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system
- Analog video and audio outputs
- DC power operation

# DSR-70

## Portable Editing Recorder

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- Long recording time; up to 184 minutes with a standard cassette and 40 minutes with a mini cassette
- Compact, all-in-one package including a 6.4-inch VGA LCD monitor, a full cut-editing controller with a Jog/Shuttle dial and an audio speaker
- VTR-to-VTR editing as a double deck editor by docking two DSR-70 units or the DSR-70 and the DNW-A25 Betacam SX portable editing recorder
- Two-way power supply system for operation on either AC or DC power
- Two-camera switching recording*1
- Sequential recording in the double deck configuration
- Parallel-run recording to make two docked DSR-70 units record simultaneously
- ClipLink operation: cue up to Mark In/Cue address, change of Mark In/Out points, change of OK/NG status and creation of new Mark In/Out points
- Audio MIX/SWAP recording
- Versatile digital interfaces: SDTI(QSDI)*2, SDI*3 and i.LINK (DV In/Out)*4
- Extensive analog interfaces: composite, component*5 and S-Video
- Frame accurate editing capability
- RS-422A remote control interface
- Built-in SMPTE time code generator/reader
- Process control for stabilizing video signals
- High-speed picture search over a range of 32 times normal speed, in both forward and reverse
- Digital slow function over a range of 0 to 0.5 times normal speed, in both forward and reverse
- Jog audio over a range of 1/30 to 1 times normal speed, in both forward and reverse
- Full tape dubbing with ClipLink Log Data
- 16:9/4:3 switchable

*1 The optional DSBK-180 Dual Video Input Board is required.
*2 The optional DSBK-150 SDTI(QSDI) Input/Output Board is required.
*3 The optional DSBK-160 SDI Input/Output Board is required.
*4 The optional DSBK-140 i.LINK/DV Input/Output Board is required.
*5 The optional DSBK-170 Analog Component Input/Output Board is required.

Note: Optional interface boards (DSBK-140/150/160/170) cannot be used in combination with each other. However, these boards can be used together with the optional DSBK-180.

# DSR-V10

## DVCAM Video Walkman® Recorder

- Superb picture quality for the DVCAM format
- Playback capability of consumer DV recorded tapes (SP mode only)
- 40 minutes recording time with a mini cassette*1
- Compact and lightweight: 970 g (2 lb 3 oz) without battery and tape
- Built-in 5.5-inch LCD monitor
- InfoLITHIUM™ system; Lithium-ion battery power system which shows the amount of power remaining in the battery, to within one minute accuracy
- i.LINK (DV In/Out) interface based on the IEEE1394 standard
- LANC interface for simple editing with a LANC-based recorder or editing system
- Auto repeat function
- Duplication mode with original time code
- Assemble editing with up to 99 events x four programs by using the optional DSRM-E1 Edit Adaptor
- Hands-free shooting capability with the optional CVX-V1 or CVX-V3 Mini Camera

*1 The DSR-V10 accepts only mini DVCAM and DV cassettes.

# Flexicart

## Multi-cassette System


- Accepts a maximum of six DSR-80 or DSR-60 units*1
- Designed to be modular and reconfigurable with optional VTRs and cassette bin units to meet differing applications
- Multiple inputs and outputs
- Fully automated, simultaneous record, playback and time delay
- Standard traffic and automation interface
- PC-driven, user-friendly Windows environment

| Applicable VTRs | VTR Mount Kit | Cassette Bin Unit | Configuration (VTR/Bin Unit ratio) | | Standard Cassette Capacity |
|---|---|---|---|---|---|
| | | | VTRs | Bin Units (4U high) | |
| DSR-80<br>DSR-60 | BKFC-54 | BKFC-21DV<br>BKFC-210*2 | 1 | 7 | 147 |
| | | | 2 | 7 | 147 |
| | | | 3 | 6 | 126 |
| | | | 4 | 5 | 105 |
| | | | 5 | 4 | 84 |
| | | | 6 | 3 | 63 |

*1 Available for standard cassettes only
*2 BKFC-210 DV Hand Kit: a robotics hand for handling DVCAM standard cassettes

# Feature Comparison of Camcorders

| | DSR-130 | DSR-300 | DSR-200A | DSR-PD100 | DSR-PD1 |
|---|---|---|---|---|---|
| **Cassette** | | | | | |
| Standard size cassette | ● | ● | ● | — | — |
| Mini size cassette | ● | ● | — | ● | ● |
| **Camera Section** | | | | | |
| TruEye process | ● | ● | — | — | — |
| DynaLatitude | ● | ● | — | — | — |
| Skin Detail | ● | ● | — | — | — |
| Clean Detail | ● | — | — | — | — |
| Camera Setup File | ● | — | — | — | — |
| SetupNavi | ● | — | — | — | — |
| SetupLog | ● | ● | — | — | — |
| TLCS (Total Level Control System) | ● | ● | — | — | — |
| EZ Focus | ● | ● | — | — | — |
| EZ mode | ● | ● | — | — | — |
| ATW (Auto Tracing White Balance) | ● | ● | — | — | — |
| Super SteadyShot | — | — | ● | ● | ● |
| **VTR Section** | | | | | |
| ClipLink | ● | ● | — | — | — |
| Photo mode | — | — | ● | ● | ● |
| **Interface** | | | | | |
| i.LINK (DV In/Out) | — | — | ● | ● | ● |
| LANC | — | — | ● | ● | ● |

● : Available
— : Not available

# Feature Comparison of VTRs

| | DSR-85 | DSR-80 | DSR-70 | DSR-60 | DSR-30 | DSR-20 |
|---|---|---|---|---|---|---|
| **Cassette** | | | | | | |
| Standard size cassette | ● | ● | ● | ● | ● | ● |
| Mini size cassette | ● | ● | ● | ● | ● | ● |
| **Digital Interface** | | | | | | |
| SDTI(QSDI) | ● | ● | ● (Option) | ●* (Option) | — | — |
| SDI | ● (Option) | ● (Option) | ● (Option) | ●* (Option) | — | — |
| i.LINK (DV In/Out) | — | — | ● (Option) | — | ● | ● |
| AES/EBU | ● | ● | — | — | — | — |
| **Analog Interface** | | | | | | |
| Composite | ● | ● | ● | ●* | ● | ● |
| Component | ● | ● | ● (Option) | ●* | — | — |
| S-Video | ● | ● | ● | ●* | ● | ● |
| RGB | — | ● | — | ●* | — | — |
| **Remote Control Interface** | | | | | | |
| RS-422A | ● | ● | ● | ● | — | — |
| RS-232C | — | — | — | — | — | ● |
| LANC | — | — | — | — | ● | ● |
| **Editing Capability** | | | | | | |
| ClipLink | ● | ● | ● | ● | — | — |
| Time code generator/reader | ● | ● | ● | ●** | ● | ● |
| High-speed data transfer | ● | — | — | — | — | — |
| Assemble editing | ● | ● | ● | — | ● | ● |
| Insert editing | ● (Video/Audio/TC) | ● (Video/Audio/TC) | ● (Video/Audio/TC) | — | ● (Video/Audio) | — |
| Search speed | Up to x ±32 | Up to x ±32 | Up to x ±32 | Up to x ±32 | Up to x ±15 | Up to x ±15 |
| Digital slow | x ±0 to 0.25 | x ±0 to 0.39 | x ±0 to 0.5 | x ±0 to 0.33 | x ±1/10, 1/5 | x ±1/10, 1/5 |
| Jog audio | x ±1/30 to 1 | x ±1/30 to 1 | x ±1/30 to 1 | x ±1/30 to 1 | x ±1/10, 1/5, 1 | x ±1/10, 1/5, 1 |
| **Others** | | | | | | |
| DV playback capability | ● | ● | ● | ● | ● | ● |
| Auto repeat/power-on playback | — | — | — | ● | ● | ● |

* Output only

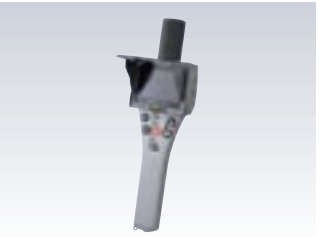
** Reader only

● : Available

— : Not available

# Optional Accessories & Peripheral Equipment

For Acquisition



## RM-VJ1
Remote Control Unit

DSR-300

## RM-M7G
Remote Control Unit

DSR-130 DSR-300

## RM-LG1
Remote Control Unit

DSR-130 DSR-300

## CCU-M5
Camera Control Unit

DSR-130

## CCU-M7
Camera Control Unit

DSR-130

## CA-WR855
Camera Adaptor

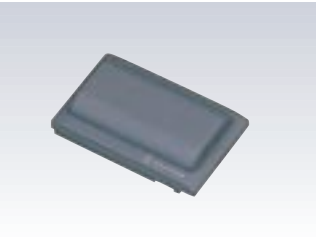
DSR-300

## NP-1B
Rechargeable Battery Pack

DSR-130 DSR-1 DSR-300

## NP-F950/B
Rechargeable Battery Pack

DSR-200A DSR-PD100



## NP-F200/B
Rechargeable Battery Pack

DSR-PD1

## BP-90A
Rechargeable Battery Pack

DSR-130 DSR-1 DSR-300

## DC-520
Battery Adaptor for NP-1B

DSR-130 DSR-1

## DC-500
Battery Adaptor for BP-90A

DSR-130 DSR-1

## DC-210
Battery Adaptor for BP-90A (waist belt type)

DSR-130 DSR-1 DSR-300

## DC-L1
Battery Adaptor for NP-1B

DSR-130 DSR-300

## DC-L90
Battery Adaptor for BP-90A

DSR-130 DSR-300

## NPA-10000/B
Battery Adaptor for three NP-F950/Bs

DSR-200A

## BC-1WD
Battery Charger for four NP-1Bs

DSR-130 DSR-1 DSR-300

## BC-410
Battery Charger for four NP-1Bs/BP-90As

DSR-130 DSR-1 DSR-300

## ACC KIT-201
Accessory Kit for DSR-200A

DSR-200A

## ACC KIT-PD1
Accessory Kit for DSR-PD1

DSR-PD1

## BP-L60A/L90A
Rechargeable Battery Pack

DSR-130 DSR-1 DSR-300

## BP-L40
Rechargeable Battery Pack

DSR-300

## BKW-L601
Battery Adaptor for BP-L60A/L90A

DSR-130 DSR-1

## BC-L50
Battery Charger for BP-L40/L60A/L90A

DSR-300

## BC-L100
Battery Charger for BP-L40/L60A/L90A/ NP-1B/BP-90A

DSR-130 DSR-1 DSR-300

## CMA-8A
Camera Adaptor

DSR-130 DSR-1 DSR-300

## AC-550
AC Adaptor

DSR-130 DSR-1 DSR-300

## AC-DN1
AC Adaptor

DSR-300

## AC-DN2A
AC Adaptor

DSR-300

## AC-V900/B
AC Adaptor/Charger

DSR-200A

## AC-V615/B
AC Adaptor/Charger

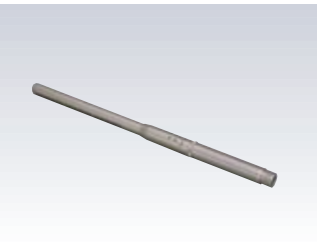
DSR-200A

## AC-V100/B
AC Adaptor/Charger

DSR-PD1

## ECM-672/670
Electret Condenser Microphone

DSR-130 DSR-300 DSR-200A DSR-PD100



## C-74
Condenser Microphone

DSR-130 DSR-300

## EC-0.5C2
Microphone Cable

DSR-130 DSR-300 DSR-PD100

## CAC-12
Microphone Holder

DSR-130 DSR-300 DSR-200A DSR-PD100

## WRT-810A
UHF Synthesized Wireless Microphone

DSR-130 DSR-1

## WRT-820A
UHF Synthesized Transmitter

DSR-130

## WRR-855A
UHF Synthesized Tuner

DSR-130 DSR-1 DSR-300

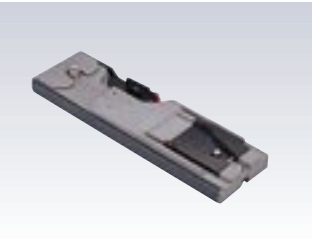
# Optional Accessories & Peripheral Equipment

**DXF-701WS**
1.5-inch Monochrome Viewfinder

DSR-130 DSR-300

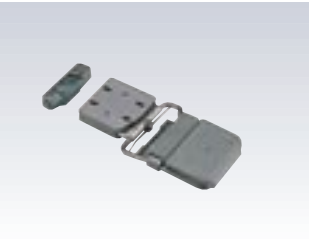
**DXF-51**
5-inch Monochrome Viewfinder

DSR-130 DSR-300



**VCT-U14**
Tripod Adaptor

DSR-130 DSR-300 DSR-200A



**CAC-4**
Chest Pad

DSR-130

**DR-100**
Intercommunication Headset

DSR-130

**CCZ-A2/A5/A10**
Connecting Cable (26-pin - 26-pin)

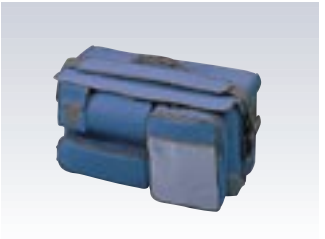
DSR-130

**CCZQ-A2/A5/A10**
Connecting Cable (26-pin - 14-pin)

DSR-130

**LC-304SFT**
Soft Carrying Case

DSR-130



**LC-300SFT**
Soft Carrying Case

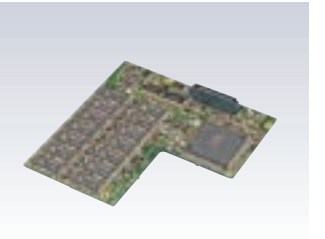
DSR-300

**LC-421**
Carrying Case

DSR-130 DSR-300

**LCR-1**
Rain Cover

DSR-130 DSR-300



**DSBK-301**
Index Picture Board

DSR-300

**DSBK-201**
Adaptor for WRR-810A

DSR-200A

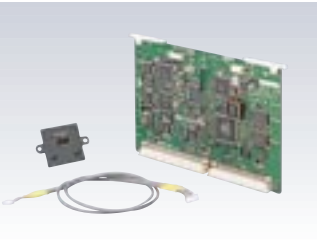
**MSA-4A** Memory Stick (4 MB)
**MSA-8A** Memory Stick (8 MB)

DSR-PD100

**VMC-IL4415/IL4435/ IL4615/IL4635**
i.LINK Cable (1.5 m/3.5 m)

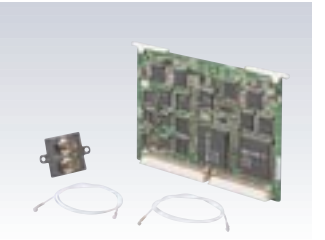
DSR-200A DSR-PD100 DSR-PD1

For
Field
Operation



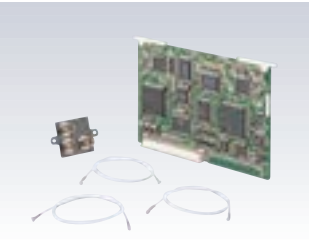
**DSBK-140**
i.LINK/DV Input/Output Board

DSR-70



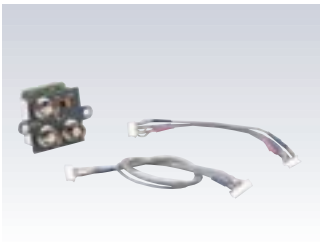
**DSBK-150**
SDTI(QSDI) Input/Output Board

DSR-70



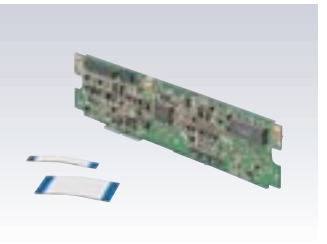
**DSBK-160**
SDI Input/Output Board

DSR-70



## DSBK-170
Analog Component Input/Output Board

DSR-70



## DSBK-180
Dual Video Input Board

DSR-70

## BP-L60A/L90A
Rechargeable Battery Pack

DSR-70

## BC-L50
Battery Charger for BP-L60A/L90A

DSR-70

## BC-L100
Battery Charger for BP-L60A/L90A

DSR-70

## CMA-8A
Camera Adaptor

DSR-70

## AC-550
AC Adaptor

DSR-70

## AC-DN2A
AC Adaptor

DSR-70

## BKNW-225
Docking Kit

DSR-70

## LC-DN220
Carrying Case

DSR-70

## RCC-5G/10G/30G
Remote Control Cable(5 m/10 m/30 m)

DSR-70

## DSRM-E1
Edit Adaptor

DSR-V10

## CVX-V1
Color Video Camera

DSR-V10

## CVX-V3
Color Video Camera

DSR-V10

## NP-F950/B
Rechargeable Battery Pack

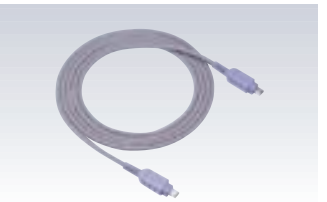
DSR-V10

## NP-F750
Rechargeable Battery Pack

DSR-V10

## AC-V700
AC Adaptor/Charger

DSR-V10

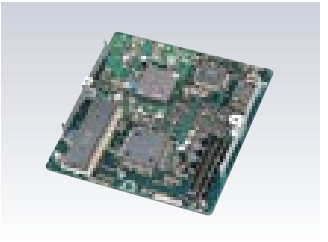


## VMC-IL4415/IL4435/ IL4615/IL4635
i.LINK Cable (1.5 m/3.5 m)

DSR-V10

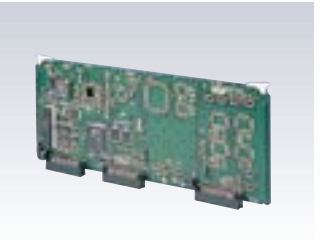
# Optional Accessories & Peripheral Equipment

For Video Production



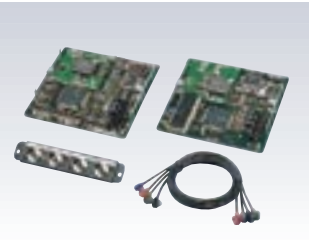
## DSBK-100
SDI Output Board

DSR-60



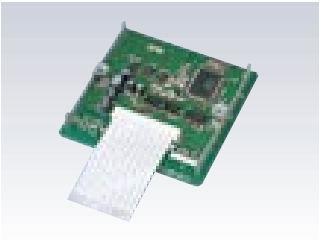
## DSBK-110
QSDI Output Board

DSR-60



## DSBK-120
SDI Input/Output Board

DSR-85 DSR-80

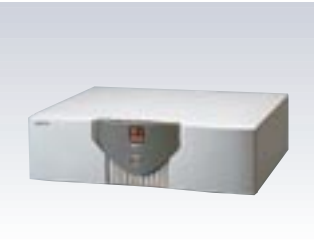


## DSBK-130
Time Code Input/Output Board
*Output only

DSR-85 DSR-80 DSR-60*

## ES-7
EditStation System

DSR-85 DSR-80 DSR-60



## ES-3
EditStation System

DSR-85 DSR-80 DSR-60 DSR-30 DSR-20

## PVE-500
Editing Control Unit

DSR-85 DSR-80 DSR-60

## DFS-500
DME Switcher

DSR-85 DSR-80 DSR-60

## DFS-300
DME Switcher

DSR-85 DSR-80 DSR-60

## RM-450A
Editing Remote Controller

DSR-85 DSR-80 DSR-60

## FXE-120
Editing System

DSR-85 DSR-80 DSR-60 DSR-30 DSR-20

## IF-FXE2
LANC Interface Box

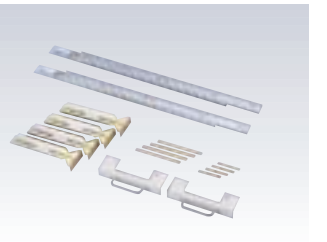
DSR-30 DSR-20

## DSRM-10
Remote Control Unit

DSR-85 DSR-80 DSR-60 DSR-30 DSR-20

## UVR-60
TBC Remote Control Unit

DSR-85 DSR-80 DSR-60



## RMM-130
Rack Mount Kit

DSR-85 DSR-80 DSR-60

## RCC-5G/10G/30G
Remote Control Cable (5 m/10 m/30 m)

DSR-85 DSR-80 DSR-60

## VMC-IL4415/IL4435/ IL4615/IL4635
i.LINK Cable (1.5 m/3.5 m)

DSR-30 DSR-20

# Tapes

## PDVM-12ME/22ME/ 32ME/40ME

Digital Video Cassette (Mini size)

DSR-130 DSR-1 DSR-300 DSR-PD100 DSR-PD1
DSR-85 DSR-80 DSR-60 DSR-30 DSR-20
DRV-1000 DSR-70 DSR-V10

## PDV-34ME/64ME/ 94ME/124ME/184ME

Digital Video Cassette (Standard size)

DSR-130 DSR-1 DSR-300 DSR-200A DSR-85
DSR-80 DSR-60 DSR-30 DSR-20 DSR-70

## PDVM-32N/40N

Digital Video Cassette
(Non IC type/Mini size)

DSR-130 DSR-1 DSR-300 DSR-PD100 DSR-PD1
DSR-85 DSR-80 DSR-60 DSR-30 DSR-20
DRV-1000 DSR-70 DSR-V10

## PDV-64N/124N/184N

Digital Video Cassete
(Non IC type/Standard size)

DSR-130 DSR-1 DSR-300 DSR-200A DSR-85
DSR-80 DSR-60 DSR-30 DSR-20 DSR-70

## PDVM-32MEM/40MEM

Digital Video Cassete
(Master tape/Mini size)

DSR-130 DSR-1 DSR-300 DSR-PD100 DSR-PD1
DSR-85 DSR-80 DSR-60 DSR-30 DSR-20
DRV-1000 DSR-70 DSR-V10

## PDV-64MEM/124MEM/ 184MEM

Digital Video Cassete
(Master tape/Standard size)

DSR-130 DSR-1 DSR-300 DSR-200A DSR-85
DSR-80 DSR-60 DSR-30 DSR-20 DSR-70

## PDVM-12CL

Cleaning Cassete Tape (Mini size)

DSR-130 DSR-1 DSR-300 DSR-PD100 DSR-PD1
DSR-85 DSR-80 DSR-60 DSR-30 DSR-20
DRV-1000 DSR-70 DSR-V10

## PDV-12CL

Cleaning Cassete Tape (Standard size)

DSR-130 DSR-1 DSR-300 DSR-200A DSR-85
DSR-80 DSR-60 DSR-30 DSR-20 DSR-70

# Specifications

## DSR-130/DSR-300/DSR-200A/DSR-PD100/DSR-PD1 Camcorders

| | DSR-130<br>Two-piece Camcorder | DSR-300<br>One-piece Camcorder |
|---|---|---|
| **General** | | |
| Power requirements | DC 12 V (10.5 to 17 V) | |
| Power consumption | 24.8 W (with VF) | 22.1 W (with VF), 20 W (without VF) |
| Operating temperature | 0 ˚C to 40 ˚C (32 ˚F to 104 ˚F) | |
| Storage temperature | -20 ˚C to 60 ˚C (-4 ˚F to 140 ˚F) | |
| Tape speed | 28.193 mm/s | |
| Recording/Playback time | Standard size: 184 min. with PDV-184ME/184N Mini size: 40 min. with PDVM-40ME/40N | |
| Fast forward/Rewind time | Standard size: approx. 12 min. with PDV-184ME/184N Mini size: approx. 3 min. with PDVM-40ME/40N | |
| Continuous recording time | Approx. 60 min. with NP-1B Battery | Approx. 80 min. with BP-L40<br>Approx. 180 min. with BP-L60A<br>Approx. 290 min. with BP-L90A |
| Mass | 7.3 kg (16 lb 1 oz)<br>(including VF, microphone, lens, battery, tape and carrying handle) | 5.7 kg (12 lb 9 oz)<br>(including VF, microphone, lens, battery and tape) |
| Dimensions (WxHxD) | 121 x 206 x 344 mm (4 7/8 x 8 1/8 x 13 5/8 inches) | 121 x 192 x 270 mm (4 7/8 x 7 5/8 x 10 3/4 inches) (without projections)<br>242 x 247 x 534 mm (9 5/8 x 9 3/4 x 21 1/8 inches) (with projections) |
| **Camera Section** | | |
| Image device | 3-chip 2/3-inch, Interline Transfer CCD | 3-chip 1/2-inch, Interline Transfer CCD |
| Optics | F1.4 medium index prism system | |
| Effective picture elements | 768 (H) x 494 (V) | |
| Total picture elements | 811 (H) x 508 (V) | |
| Sensing area | 6.6 mm x 8.8 mm (equivalent to a 2/3-inch pickup tube) | 6.4 mm x 4.8 mm (equivalent to a 1/2-inch pickup tube) |
| Built-in filters | 1: 3200 K 2: 5600 K+1/8ND<br>3: 5600 K 4: 5600 K+1/64ND | 1: 3200 K/3000 K (Switchable) 2: 5600 K+1/8ND<br>3: 5600 K 4: 5600 K+1/64ND |
| Lens mount | Sony 2/3-inch Bayonet mount | Sony 1/2-inch Bayonet mount |
| Signal system | NTSC color system | |
| Scanning system | 2:1 interlaced, 525 lines, 60 fields/s | |
| Horizontal frequency | 15.734 kHz | |
| Vertical frequency | 59.94 Hz | |
| Sync system | Internal and External with the VBS or BS signal | |
| Horizontal resolution | 850 TV lines | 800 TV lines |
| Vertical resolution | 400 TV lines (without EVS), 450 TV lines (with EVS) | |
| Minimum illumination | 0.5 lx with F1.4, Hyper Gain (30 dB+DPR*1) 0.8 lx with F1.8, Hyper Gain (30 dB+DPR) | |
| Sensitivity | F11 at 2000 lx (3200 K, 89.9% reflectance) (typical) | |
| Gain selection | -3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB, 18dB+DPR, 24 dB, 24 dB+DPR, Hyper Gain (30 dB+DPR) | |
| Shutter speed selection | OFF, 1/100, 1/250, 1/500, 1/1000, 1/2000 sec. | |
| S/N ratio | 63 dB (typical) | 62 dB (typical) |
| Registration | 0.05 % (all zones, without lens) | |
| Geometric distortion | Below measurable level | |
| **VTR Section** | | |
| Video performance*2<br>Bandwidth | Luminance: 30 Hz to 5.0 MHz ±1.0 dB, 5.75 MHz +0/-3.0 dB (typical measurement), Chrominance: 30 Hz to 1.5 MHz +1.0/-5.0 dB | |
| S/N ratio | More than 55 dB | |
| K-factor (K2T, KPB) | Less than 2.0 % | |
| Y/C delay | Less than 30 nsec. | |
| Audio performance*2<br>Frequency response | 2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz +0.5/-1.0 dB, 4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz +0.5/-1.0 dB | |
| Dynamic range | More than 80 dB | |
| Distortion (THD) | Less than 0.08 % | |
| **Input/Output Connectors** | | |
| Signal inputs | Genlock Video In: BNC, 1.0 Vp-p, 75 Ω<br>Ext Audio In CH-1/2: XLR 3-pin x2 female, -60 dBu, 3 kΩ/+4 dBu, 10 kΩ<br>Time Code In: BNC, 0.5 Vp-p to 18 Vp-p, 10 kΩ | Genlock Video In: BNC, 1.0 Vp-p, 75 Ω<br>Ext Audio In CH-1/2: XLR 3-pin x2 female, -60 dBu, 3 kΩ/+4 dBu, 10 kΩ<br>Time Code In: BNC, 0.5 Vp-p to 18 Vp-p, 10 kΩ<br>MIC In: XLR 3-pin female |
| Signal outputs | Camera Head BNC Connector of CA-537 docked to DXC-D30<br>VBS: 1.0 Vp-p, sync negative<br>26-pin Connector:<br>VBS: 1.0 Vp-p, sync negative<br>Y/R-Y/B-Y: Y: 1.0 Vp-p, sync negative<br>R-Y/B-Y: 700 mVp-p<br>RGB: 1.4 Vp-p<br>Y/C: Y: 1.0 Vp-p, sync negative<br>C: 0.286 Vp-p (at burst level)<br>Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω<br>S-Video: DIN 4-pin<br>Y: 1.0 Vp-p, sync negative, 75 Ω<br>C: 0.286 Vp-p, 75 Ω<br>Audio CH-1/2 Out: RCA pin, -10 dBu, 47 kΩ<br>Monitor Out: BNC, 1.0 Vp-p, sync negative, 75 Ω<br>Time Code Out: BNC, 1.0 Vp-p, 75 Ω | Video Out: BNC, 1.0 Vp-p, sync negative, 75 Ω<br>VBS: 1.0 Vp-p, sync negative<br>Y/R-Y/B-Y: Y: 1.0 Vp-p, sync negative<br>R-Y/B-Y: 700 mVp-p<br>Y/C: Y: 1.0 Vp-p, sync negative<br>C: 0.286 Vp-p (at burst level)<br>S-Video: DIN 4-pin<br>Y: 1.0 Vp-p, sync negative, 75 Ω<br>C: 0.286 Vp-p, 75 Ω<br>Audio CH-1/2 Out: RCA pin, -10 dBu, 47 kΩ<br>Monitor Out: BNC, 1.0 Vp-p, sync negative, 75 Ω<br>Time Code Out: BNC, 1.0 Vp-p, 75 Ω |
| Others | Interface: Pro 76-pin Digital, Pro 50-pin<br>DC In: XLR 4-pin, male<br>DC Out: 4-pin<br>Earphone Out: Stereo mini jack<br>Lens: 12-pin<br>VF: DIN 8-pin, 20-pin<br>REMOTE 1: Stereo mini<br>REMOTE 2: 10-pin | VTR Connector: 26-pin, male<br>DC In: XLR 4-pin, male<br>DC Out: 4-pin, female<br>Earphone Out: Stereo mini jack<br>Battery Terminal: 5-pin<br>Light Out: 2-pin, female<br>WRR Out: 7-pin<br>Lens: 14-pin hot-shoe type or 12-pin<br>VF: 20-pin<br>REMOTE 1: Stereo mini<br>REMOTE 2: 10-pin |
| **Supplied Accessories** | | |
| | LC-421 Carrying Case (x1) (for DSR-130F1),<br>VCL-918BY Zoom Lens (x1) (for DSR-130F1/DSR-130K1),<br>DXF-701WS Viewfinder (x1), Microphone (x1), VCT-U14 Tripod Adaptor (x1),<br>Shoulder Strap (x1), RM-LG1 Remote Control Unit (x1), Handle (x1),<br>Operation Manual (x1), ClipLink Guide (x1) | LC-300SFT Soft Carrying Case (x1) (for DSR-300F),<br>VCL-714BXA Zoom Lens (x1) (for DSR-300F/DSR-300K),<br>DXF-701WS Viewfinder (x1), Microphone (x1), Wind Screen (x1),<br>VCT-U14 Tripod Adaptor (x1), Shoulder Strap (x1),<br>RM-LG1 Remote Control Unit (x1), Lens Mount Cap (x1),<br>Flange Focal Length Adjustment Test Chart (x1), Switch Guard (x1),<br>Operation Manual (x1), ClipLink Guide (x1) |
| | *1 DPR is equivalent to +6 dB gain up.<br>18 dB+DPR: Equivalent to +24 dB<br>24 dB+DPR: Equivalent to +30 dB<br>Hyper Gain (30 dB+DPR): Equivalent to +36 dB | *2 The specifications of "Video/Audio Performance" of the DSR-130/300 were measured by playing back material on the DSR-85 (via analog component out) that had been recorded on the DSR-130/300. |

| | DSR-200A<br>One-piece Camcorder | DSR-PD100<br>Handycam-style Camcorder | DSR-PD1<br>Compact Camcorder |
|---|---|---|---|
| | | | |
| | DC 7.2 V (Battery operation), DC 8.4 V (AC adaptor) | | — |
| | 11.6 W (during camera recording) | 4.3 W (with VF), 5.3 W (with LCD) | 6 W (LCD on), 5 W (LCD off) |
| | 0 ˚C to 40 ˚C (32 ˚F to 104 ˚F) | | — |
| | -20 ˚C to 60 ˚C (-4 ˚F to 140 ˚F) | | — |
| | 28.193 mm/s | | — |
| | 184 min. with PDV-184ME/184N | 40 min. with PDVM-40ME/40N | |
| | — | — | — |
| | — | Approx. 70 min. (LCD off) / 55 min. (LCD on) with NP-F330<br>Approx. 465 min. (LCD off) / 365 min. (LCD on) with NP-F950/B | 75 min. with NP-F200/B (fully charged) (LCD on) |
| | Approx. 3.6 kg (7 lb 15 oz) (without tape and batteries)<br>Approx. 4.7 kg (10 lb 8 oz) (with tape and NP-F950 x3 in NPA-10000/B) | Approx. 900 g (1 lb 15 oz) (without tape and battery) | 520 g (1.1 lb) (without tape and battery) |
| | 216 x 237 x 474 mm (8 5/8 x 9 3/8 x 18 3/4 inches) | 93 x 112 x 193.5 mm (3 3/4 x 4 1/2 x 7 5/8 inches) | 59 x 129 x 118 mm (2 3/8 x 5 1/8 x 4 5/8 inches) |
| | | | |
| | 3-chip 1/3-inch, Interline Transfer Sensor | 3-chip 1/4-inch color CCD, 380,000 pixels, Progressive/Interlace Scan | 1/3-inch color CCD, 680,000 pixels (gross) |
| | — | — | — |
| | 768 (H) x 494 (V) | — | — |
| | 811 (H) x 508 (V) | — | — |
| | — | — | — |
| | 1/10 ND | — | — |
| | — | — | — |
| | NTSC color system | | |
| | 2:1 interlaced, 525 lines, 60 fields/s | | |
| | — | — | — |
| | — | — | — |
| | — | — | — |
| | — | 500 TV lines | — |
| | — | — | — |
| | 3 lx | 4 lx | 3 lx with F1.8 |
| | — | — | — |
| | Auto/Manual (-3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 15 dB, 18 dB) | — | — |
| | Auto/Manual<br>(1/4, 1/8, 1/15, 1/30, 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.) | 1/4 to 1/10000 sec | 1/60 to 1/4000 sec. (In AE mode) |
| | — | — | — |
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| | — | — | — |
| | — | — | — |
| | | | |
| | Audio In: XLR 3-pin x2 (MIC/LINE selectable)<br>Stereo mini jack x1 | Audio/Video In/Out*3: Special AV mini (converts to Phono)<br>S-Video In/Out: Mini DIN 4-pin<br>i.LINK (DV In/Out): IEEE1394-based, 4-pin | — |
| | Video Out:<br>Composite: BNC x1, Pin jack x1 1.0 Vp-p, sync negative, 75 Ω,<br>S-Video: Mini DIN 4-pin<br>Y: 1.0 Vp-p, 75 Ω, unbalanced<br>C: 0.286 Vp-p (sub carrier burst), 75 Ω, unbalanced<br>Audio Out: Phono jack (L&R x1)<br>i.LINK (DV In/Out): IEEE1394-based, 4-pin | | Video/Audio Out: Special AV mini (to convert RCA pin)<br>S-Video<br>Audio Out: Special AV mini stereo |
| | LANC: Stereo mini-mini jack<br>Headphone: Stereo mini jack<br>RFU DU Out: Special mini jack (DC 5 V)<br>External DC In: 4-pin for DK-715 cable<br>VF: 8-pin | LANC: Stereo mini-mini jack<br>Headphone: Stereo mini jack<br>Microphone: Stereo mini (XLR 3-pin x1 via adaptor)<br>External DC In: 8.4 V (AC-L10 AC Adaptor) | LANC: Stereo mini jack (using optional VC-LM7)<br>Headphone: Stereo mini jack<br>Microphone: Stereo (Wind position, auto only) |
| | | | |
| | RMT-806 Wireless Remote Controller (x1),<br>AV Stereo Cable (x1), S Cable (x1),<br>R6 Batteries (x2), Lens Cap (x1), Shoulder Pad (x1),<br>Side Pad (x1), Operation Manual (x1) | RMT-811 Wireless Remote Commander (x1),<br>Wide Conversion Lens (x1), Lens Hood (x1), Lens Cap (x1)<br>AC-L10 AC Adaptor (x1), NP-F330 InfoLITHIUM<br>Rechargeable Battery Pack (x1),<br>MSAC-PC1 Memory Stick/PC Card Adaptor (x1),<br>MSA-4A Memory Stick (x1), MSAC-PR1 Parallel Port Adaptor (x1),<br>R6 Batteries (x2), XLR Adaptor (x1),<br>Special Stereo AV Cable (x1), Carrying Belt (x1) | RMT-806 Wireless Remote Controller (x1),<br>AV Cable-special (x1),<br>Vanadium-Lithium Battery (built-in) (x1),<br>AA Batteries (x2) |
| | | *3 Picture quality by analog input is not satisfying for proffesional use. | |

# Specifications

## DSR-1 Dockable Recorder

| General | |
|---|---|
| Power requirements | DC 12 V, +5/-1 V |
| Power consumption | 12 W (10 W in recording mode with the DXC-D30) |
| Operating temperature | 0˚C to 40˚C (32˚F to 104˚F) |
| Storage temperature | -20˚C to 60 ˚C (-4˚F to 140˚F) |
| Tape speed | 28.193 mm/s |
| Recording/ Playback time | Standard size:<br>184 min. with PDV-184ME/184N<br>Mini size:<br>40 min. with PDVM-40ME/40N |
| Fast forward/ Rewind time | Standard size:<br>approx. 12 min. with PDV-184ME/184N<br>Mini size:<br>approx. 3 min. with PDVM-40ME/40N |
| Continuous e recording tim | Approx. 60 min. with NP-1B Battery (DSR-1+DXC-D30) |
| Mass | 2.85 kg (6 lb 4 oz) (including battery) |
| Dimensions (WxHxD) | 118 x 185 x 210 mm<br>(4 3/4 x 7 3/8 x 83/8 inches) |
| **Video Performance**[*4] | |
| Bandwidth | Luminance:<br>30 Hz to 5.0 MHz ±1.0 dB<br>5.75 MHz +0/-3.0 dB<br>(typical measurement)<br>Chrominance:<br>30 Hz to 1.5 MHz +1.0/-5.0 dB |
| S/N ratio | More than 55 dB |
| K-factor (K2T, KPB) | Less than 2.0 % |
| Y/C delay | Less than 30 nsec. |
| **Audio Performance**[*4] | |
| Frequency response | 2CH mode (48 kHz/16-bit):<br>20 Hz to 20 kHz +0.5/-1.0 dB<br>4CH mode (32 kHz/12-bit):<br>20 Hz to 14.5 kHz +0.5/-1.0 dB |
| Dynamic range | More than 80 dB |
| Distortion (THD+N) | Less than 0.08 % |
| **Input/Output Connectors** | |
| Signal inputs | Genlock Video In:<br>BNC, 1.0 Vp-p, 75 Ω<br>Ext Audio In CH-1/2:<br>XLR 3-pin x2 female<br>-60 dBu, 3 kΩ/+4 dBu, 10 kΩ<br>Time Code In:<br>BNC, 0.5 Vp-p to 18 Vp-p, 10 kΩ |
| Signal outputs | Video Out:<br>BNC, 1.0 Vp-p, sync negative, 75 Ω<br>S-Video: DIN 4-pin<br>Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω<br>Audio CH-1/2 Out:<br>RCA pin, -10 dBu, 47 kΩ<br>Time Code Out:<br>BNC, 1.0 Vp-p, 75 Ω |
| Others | Interface:<br>Pro 76-pin Digital, Pro 50-pin<br>DC 12 V (rear): XLR 4-pin, male<br>DC Out: 4-pin<br>Earphone Out: Stereo mini jack |
| **Supplied Accessories** | |
| | Shoulder Strap (x1)<br>Connector Cap (x1)<br>Lithium Battery (type CR2032) (x1)<br>M4 x 6 Screws (x2)<br>M4 x 12 Screws (x2)<br>Operation Manual (x1)<br>ClipLink Guide (x1) |

[*4] The specifications of "Video/Audio performance" of the DSR-1 were measured by playing back material on the DSR-85 (via analog component out) that had been recorded on the DSR-1.

## DSR-20/DSR-30/DSR-60/DSR-80/DSR-85

| | DSR-20 Recorder | DSR-30 Recorder |
|---|---|---|
| **General** | | |
| Power requirements | AC: 120 V, 50/60 Hz DC: 12 V | AC 120 V, 50/60 Hz |
| Power consumption | AC: 28 W DC: 2.0 A (4.0 A PEAK) | 32 W |
| Operating temperature | 5 °C to 40 °C (41 °F to 104 °F) | |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) | |
| Mass | Approx. 5.0 kg (11 lb) | Approx. 9.2 kg (20 lb 4 oz) |
| Dimensions (WxHxD) | 215 x 98 x 392 mm (8 1/2 x 3 7/8 x 15 1/2 inches) (including external projections) | 430 x 129 x 374 mm (17 x 5 1/8 x 14 3/4 inches) (including external projections) |
| Tape speed | 28.193 mm/s | |
| Recording/Playback time | Standard size: More than 184 min. with PDV-184ME/184N, Mini size: More than 40 min. with PDVM-40ME/40N | |
| Fast forward/Rewind time | Less than 2 min. with PDV-184ME/184N (Tape rewind time) | |
| Search speed | When controlling via RMT-DS20 (for DSR-20), RMT-DS30 (for DSR-30), or DSRM-10:<br>x-2, x-1, x-1/5, still, x1/5, x1, x2, Cue/Review (10 or 15 times) | |
| **Video Performance** | | |
| Bandwidth (via analog component I/O)<br>Luminance:<br>Chrominance: | — | — |
| S/N raito (via analog component I/O) | — | — |
| K-factor (K2T, KPB) | — | — |
| Y/C delay | — | — |
| **Audio Performance** | | |
| Frequency response | — | — |
| Dynamic range | — | — |
| Distortion (THD+N) | — | — |
| **Video Signal Inputs** | | |
| <Analog> Ref.Video | — | — |
| Video | Composite, BNC x1*, 1.0 Vp-p, 75 Ω, sync negative<br>* shared with the External Sync IN | Composite, BNC x1, Pin jack x1, 1.0 Vp-p, 75 Ω, sync negative |
| Component | — | — |
| RGB/Component (selectable) | — | — |
| S-Video | DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) | DIN 4-pin x2, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) |
| <Digital> SDI | — | — |
| SDTI(QSDI) | — | — |
| i.LINK (DV In/Out) | 4-pin jack x1, IEEE1394-based | |
| **Audio Signal Inputs** | | |
| <Analog> Audio | Phono jacks (L&R) x1, 2 Vrms (full bit) | Phono jacks (stereo) rear x1/front x1, 2 Vrms (full bit) |
| <Digital> AES/EBU | — | — |
| **Video Signal Outputs** | | |
| <Analog> Ref.Video | — | — |
| Video | Composite, BNC x1, Monitor Out x1, 1.0 Vp-p, 75 Ω, sync negative | Composite, BNC x2, Pin jack x1, 1.0 Vp-p, 75 Ω, sync negative |
| Component | | |
| RGB/Component (selectable) | —<br>— | —<br>— |
| S-Video | DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) | DIN 4-pin x2, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) |
| <Digital> SDI* | — | — |
| SDTI(QSDI) | — | — |
| i.LINK (DV In/Out) | 4-pin jack x1*, IEEE1394-based * shared with input connector | |
| **Audio Signal Outputs** | | |
| <Analog> Audio | Phono jacks (L&R) x2, 2 Vrms (full bit)<br>L: CH1, CH3 or CH1/3 mix R: CH2, CH4 or CH2/4 mix | Phono jacks x1 (stereo), 2 Vrms (full bit) |
| <Digital> AES/EBU | — | — |
| **Time Code** | | |
| Time code In | — | — |
| Time code Out | — | — |
| **Remote** | | |
| | LANC: Stereo mini-mini jack x1<br>RS-232C: D-sub 9-pin (cross) connector x1<br>Control-S (SIRCS) In: Mini jack x1<br>Control-S (SIRCS) Out: Mini jack x1 | LANC: Stereo mini-mini jack x2(front x1, rear x1, priority on the front)<br>Control-S (SIRCS) In: Mini jack x1<br>Control-S (SIRCS) Out: Mini jack x1 |
| **Others** | | |
| | DC In: Canon 4-pin x1, 12 V<br>Headphones: Stereo mini jack x1 | Microphone In: Mini jack x1 (low impedance)<br>Headphones: Stereo mini jack x1<br>Trigger In: Phono jack x1 (active short) |
| **Supplied Accessories** | | |
| | AC Power Cord (x1), RMT-DS20 Wireless Remote Controller (x1), Size AA (R6) Batteries (x2), DVM12CLE Cleaning Cassette (x1), Operation Manual (x1), RS-232C Protocol Manual (x1) | AC Power Cord (x1), RMT-DS30 Wireless Remote Controller (x1), Size AA (R6) Batteries (x2), LANC Cable (x1), DVM12CLE Cleaning Cassette (x1), Operation Manual (x1) |

| | DSR-60<br>Editing Player | DSR-80<br>Editing Recorder | DSR-85<br>High-speed Editing Recorder |
|---|---|---|---|
| | | | |
| | AC 100 to 120 V, 50/60 Hz | | |
| | 85 W | 140 W | 185 W |
| | 5 °C to 40 °C (41 °F to 104 °F) | | |
| | -20 °C to 60 °C (-4 °F to 140 °F) | | |
| | 18 kg (39 lb 10 oz) | 19 kg (41 lb 14 oz) | 21 kg (46 lb 4 oz) |
| | 427 x 174 x 494 mm (16 7/8 x 6 7/8 x 19 1/2 inches) (excluding external projections) | | |
| | 28.193 mm/s | | |
| | Standard size: More than 184 min. with PDV-184ME/184N, Mini size: More than 40 min. with PDVM-40ME/40N | | |
| | Standard size: Less than 3 min. with PDV-184ME/184N, Mini size: Less than 1 min. with PDVM-40ME/40N | | |
| | When controlling via RS-422A: Search speed is up to 32 times, forward and reverse<br>When controlling via DSRM-10:<br>Jog mode: Frame by frame to x2, forward and reverse<br>Shuttle mode: 8 steps, still to x16 normal speed, forward and reverse<br>Digital slow mode: 3 steps, still, x1/5 and x1/10 normal speed, forward and reverse<br>Jog audio mode: x1/30 to x1, forward and reverse | | |
| | | | |
| | 30 Hz to 5.0 MHz ±1.0 dB 5.75 MHz +0/-3.0 dB (typical measurement)<br>30 Hz to 1.5 MHz +1.0/-5.0 dB | | |
| | More than 55 dB | | |
| | Less than 2.0 % | | |
| | Less than 30 nsec. | | |
| | | | |
| | 2CH mode (48 kHz/16-bit): 20 Hz to 20 kHz +0.5/-1.0 dB, 4CH mode (32 kHz/12-bit): 20 Hz to 14.5 kHz +0.5/-1.0 dB | | |
| | More than 85 dB | | |
| | Less than 0.05 % | | |
| | | | |
| | Composite, BNC x2, loop-through connection, 1.0 Vp-p, 75 Ω, sync negative | | |
| | — | Composite, BNC x2, loop-through connection, 1.0 Vp-p, 75 Ω, sync negative | |
| | — | — | BNC x3, Luminance: 1.0 Vp-p, 75 Ω, sync negative<br>Chrominance: 0.7 Vp-p, 75Ω |
| | — | BNC x3, Y/R-Y/B-Y: Y: 1.0 Vp-p, 75 Ω, sync negative<br>R-Y/B-Y: 0.7 Vp-p, 75 Ω (75 %)<br>R.G (w/o Sync).B: 0.7 Vp-p, 75 Ω<br>G (w/Sync): 1.0 Vp-p, 75 Ω, sync negative | — |
| | — | DIN 4-pin, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (at burst level) | |
| | — | BNC x2*, active-through connection, Conforms to Serial Digital Interface (270 Mbps), SMPTE 259M<br>* Using optional DSBK-120 SDI Input/Output Board | |
| | — | BNC x1, Conforms to SDTI (270 Mbps), SMPTE 305M | |
| | — | — | — |
| | | | |
| | — | XLR 3-pin female x4, -9 dBu to 28 dBu, 600 Ω/10 kΩ, balanced | |
| | — | XLR 3-pin female x2, 110 Ω, balanced | |
| | | | |
| | BNC x1, Black burst: 0.286 Vp-p, 75 Ω, sync negative, Composite sync*: 2.0 Vp-p, 75 Ω, sync negative<br>*when not adding sync to RGB output | | BNC x1, 0.286 Vp-p, 75 Ω, sync negative |
| | Composite, BNC x2, 1.0 Vp-p, 75 Ω, sync negative * Video 1/2 (SUPER) | | |
| | — | — | BNC x3 ,Luminance: 1.0 Vp-p, 75 Ω, sync negative Chrominance: 0.7 Vp-p, 75 Ω |
| | BNC x3, Y/R-Y/B-Y: Y: 1.0 Vp-p, 75 Ω, sync negative<br>R-Y/B-Y: 0.7 Vp-p, 75 Ω (75 %)<br>R.G (w/o Sync).B: 0.7 Vp-p, 75 Ω<br>G (w/Sync): 1.0 Vp-p, 75 Ω, sync negative | | — |
| | DIN 4-pin, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (at burst level) | | |
| | BNC x2, Conforms to Serial Digital Interface (270 Mbps), SMPTE 259M * Using optional DSBK-120 SDI Input/Output Board for DSR-85/80 and DSBK-100 SDI Output Board for DSR-60 | | |
| | BNC x1, Conforms to SDTI (270 Mbps), SMPTE 305M *Using optional DSBK-110 QSDI Output Board for DSR-60 | | |
| | — | — | — |
| | | | |
| | XLR 3-pin male x4, 4 dBu, 600 Ω loading, low impedance, balanced | | |
| | — | XLR 3-pin male x2, 2 to 7 Vp-p, 110 Ω, balanced | |
| | | | |
| | — | BNC x1, 0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced * Using optional DSBK-130 Time Code Input/Output Board | |
| | BNC x1, 2.2 Vp-p, 600 Ω, unbalanced * Using optional DSBK-130 Time Code Input/Output Board | | |
| | | | |
| | RS-422A: 9-pin multi connector x1<br>TBC: D-sub 15-pin connector x1<br>Control-S (SIRCS): Stereo mini jack x1 | | |
| | | | |
| | Audio monitor: RCA phono jack x1, -6 dBu, 47 kΩ, unbalanced<br>Headphones: JM-60 headphone jack x1, -16 dBu, 8 Ω, unbalanced | | |
| | | | |
| | AC Power Cord (x1), RCC-5G Remote Control Cable (x1),<br>Operation Manual (x1), ClipLink Guide (x1) | | |

# Specifications

## DSR-70 Portable Editing Recorder

| General | |
|---|---|
| Power requirements | DC 12 V |
| Power consumption | 46 W (without options) |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) |
| Mass | 5.8 kg (12 lb 12 oz) |
| Dimensions (WxHxD) | 211 x 149 x 443 mm (8 3/8 x 5 7/8 x 17 1/2 inches) |
| Tape speed | 28.193 mm/s |
| Recording/Playback time | Standard size: More than 184 min. with PDV-184ME/184N<br>Minis size: More than 40 min. with PDVM-40ME/40N |
| Fast forward/Rewind time | Standard size: Less than 3 min. with PDV-184ME/184N<br>Mini size: Less than 1 min. with PDVM-40ME/40N |
| Search speed | x32, forward and reverse |
| **Video Signal Inputs** | |
| **Analog** | |
| Ref.Video | BNC x2, loop-through connection,<br>Composite, 1.0 Vp-p, 75 Ω, sync negative |
| Video | BNC x2, loop-through connection,<br>Composite, 1.0 Vp-p, 75 Ω, sync negative |
| Component | BNC x3, Y: 1.0 Vp-p, 75 Ω, sync negative<br>R-Y: 0.7 Vp-p, 75 Ω (75%)<br>B-Y: 0.7 Vp-p, 75 Ω (75%)<br>* Using optional DSBK-170 Analog Component Input/Output Board |
| S-Video | DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (at burst level) |
| **Digital** | |
| SDI | BNC x1, Conforms to Serial Digital Interface (270 Mbps), SMPTE 259M<br>* Using optional DSBK-160 SDI Input/Output Board |
| SDTI(QSDI) | BNC x1, Conforms to SDTI (270 Mbps), SMPTE 305M<br>* Using optional DSBK-150 SDTI(QSDI) Input/Output Board |
| i.LINK (DV In/Out) | 6-pin x1, IEEE1394-based<br>* Using optional DSBK-140 i.LINK/DV Input/Output Board |
| **Audio Signal Inputs** | |
| **Analog** | |
| Audio (CH-1, 2) | XLR 3-pin female x2 |

| Video Signal Outputs | |
|---|---|
| **Analog** | |
| Ref.Video | BNC x1, 0.286 Vp-p, 75 Ω, sync negative |
| Video 1/2 (SUPER) | BNC x2, Composite, 1.0 Vp-p, 75 Ω, sync negative |
| Component | BNC x3, Y: 1.0 Vp-p, 75 Ω, sync negative<br>R-Y: 0.7 Vp-p, 75 Ω (75%)<br>B-Y: 0.7 Vp-p, 75 Ω (75%)<br>* Using optional DSBK-170 Analog Component Input/Output Board |
| S-Video | DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (at burst level) |
| **Digital** | |
| SDI | BNC x2, Conforms to Serial Digital Interface (270 Mbps), SMPTE 259M<br>* Using optional DSBK-160 SDI Input/Output Board |
| SDTI(QSDI) | BNC x1, Conforms to SDTI (270 Mbps), SMPTE 305M<br>* Using optional DSBK-150 SDTI(QSDI) Input/Output Board |
| i.LINK (DV In/Out) | 6-pin x1, IEEE1394-based<br>* Using optional DSBK-140 i.LINK/DV Input/Output Board |
| **Audio Signal Outputs** | |
| **Analog** | |
| Audio (CH-1, 2 or CH-3, 4) | XLR 3-pin male x2 |
| **Time Code** | |
| Time code In | BNC x1 |
| Time code Out | BNC x1 |
| **LCD** | |
| LCD display | x1, 6.4-inch VGA, 640 (H) x 480 (V) |
| **Speaker** | |
| Built-in speaker | Monaural |
| **Remote** | |
| RS-422A | 9-pin multi connector x1 |
| **Others** | |
| | DC In: XLR 4-pin x1, DC 12 V<br>Audio monitor (R/L): RCA phono jack x1<br>Headphones: JM-60 stereo phone jack x1 |
| **Supplied Accessories** | |
| | Carrying Belt (x1)<br>Connector Cap (x1 / per interface)<br>Operation Manual (x1) |

## DSR-V10 DVCAM Video Walkman Recorder

| General | |
|---|---|
| Power requirements | DC: 7.2 V (Battery operation)<br>DC: 8.4 V (AC adaptor operation) |
| Power consumption | 11.5 W (with LCD panel ON) |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) |
| Mass | 970 g (2 lb 3 oz) (without tape and battery) |
| Dimensions (WxHxD) | 148 x 62 x 135 mm (5 13/16 x 2 7/16 x 5 5/16 inches) |
| Tape speed | 28.193 mm/s |
| LCD screen | 5.5-inch |
| **Video** | |
| Video signal | EIA standard, NTSC color |
| Video input/output | Composite: RCA pin x1, 1.0 Vp-p, 75 Ω, unbalanced, sync negative<br>S-Video: Mini DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) |

| Audio | |
|---|---|
| Audio signals | Recording: 48 kHz/16-bit, 32 kHz/12-bit<br>Playback: 48 kHz/16-bit, 32 kHz/12-bit,<br>32 kHz/16-bit, 44.1 kHz/16-bit |
| Audio input/output | Phono jack (Stereo (L/R) x1, RCA x2),<br>-7.5 dBs (0 dBu=0.775 Vrms) |
| **Others** | |
| | i.LINK (DV In/Out): 4-pin, IEEE1394-based<br>LANC: Stereo mini-mini jack<br>Headphone: Stereo mini jack, 8 Ω<br>Camera/Editor connector: 20-pin |
| **Supplied Accessories** | |
| | AC-V700 AC Adaptor/Charger (x1)<br>DK-415 DK Cable (x1)<br>Carrying Belt (x1)<br>Operation Manual (x1) |

### DSRM-E1 (Edit Adaptor for DSR-V10)

| General | |
|---|---|
| Power requirements | DC: 7.2 V (supplied from the DSR-V10)<br>DC: 8.4 V (AC adaptor operation) |
| Power consumption | Approx. 1.8 W |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) |
| Mass | Main unit: 160 g (5.6 oz) Controller: 340 g (12 oz) |

| | |
|---|---|
| Dimensions (WxHxD) | Main unit: 69 x 61 x 134 mm (2 3/4 x 2 1/2 x 5 3/8 inches)<br>Controller: 184 x 42 x 128 mm (7 1/4 x 1 11/16 x 5 1/8 inches) |
| **Connectors** | |
| | Multi connector: 20-pin<br>Control unit: Mini DIN 8-pin<br>LANC: Stereo mini-mini jack |
| **Monitor Output** | |
| Video output | RCA pin x1, Composite, 1.0 Vp-p, 75 Ω, unbalanced, sync negative |
| Audio output | Phono jack (Stereo (L1, R1) x1), 0.327 V, impedance 470 Ω or less |

### CVX-V1/CVX-V3 (Color Video Camera for DSR-V10)

| General | |
|---|---|
| Power requirements | DC: 7.2 V (Battery operation)<br>DC: 8.4 V (AC adaptor operation) |
| Power consumption | 1.8 W |
| Operating temperature | 0 °C to 40 °C (32 °F to 104 °F) |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) |
| Mass | Camera head: CVX-V1: 25 g (0.85 oz)<br>CVX-V3: 75 g (2.6 oz)<br>CCU: CVX-V1/CVX-V3: 135 g (4.8 oz) (without battery) |
| Dimensions (WxHxD) | Camera head: CVX-V1: 22 x 18 x 60 mm<br>(1 4/16 x 23/32 x 2 3/8 inches)<br>CVX-V3: 36 x 40 x 70 mm<br>(1 7/16 x 1 5/8 x 2 7/8 inches)<br>CCU: CVX-V1/CVX-V3: 35 x 110 x 60 mm<br>(1 7/16 x 4 3/8 x 2 3/8 inches) |

| Camera | |
|---|---|
| Image device | 1/4-inch Interline Transfer CCD |
| Picture elements | Total: 410 k Effective: 380 k |
| Lens | CVX-V1: F1.8 CVX-V3: F2.8 to 4 |
| Focal length | CVX-V1: f=3.9 mm (35 mm conversion: 38 mm)<br>CVX-V3: f=3.5 to 10.5 mm (35 mm conversion: 35 to 105 mm) |
| Minimum illumination | CVX-V1: 2 lx CVX-V3: 5 lx |
| Gain selection | CVX-V1: Auto/Hold CVX-V3: Auto |
| White balance | CVX-V1: Auto/Hold CVX-V3: Auto |
| Shutter speed | CVX-V1: Auto, 1/60, 1/100. 1/250, 1/500, 1/2000, 1/10000 |
| **Other Connectors (on CCU)** | |
| | External mic In: Stereo mini-mini jack<br>Multi connector: 20-pin<br>Battery connector |
| **Supplied Accessories** | |
| | Video Walkman Attachment Unit (x1)<br>Operation Manual (x1) |

# *DRV-1000* DVCAM Drive

| General | |
|---|---|
| Power requirements | 5 V: 5 A (Max.) / 700 mA (Stop)<br>12 V: 0.8 A (Max.) / 130 mA (loading/unloading) |
| Power consumption | 5 V: 25 VA (Max.)  12 V: 9.6 VA (Max.) |
| Operating temperature | 5 °C to 40 °C (41 °F to 104 °F) |
| Storage temperature | -20 °C to 60 °C (-4 °F to 140 °F) |
| Tape speed | 28.193 mm/s |
| Mass | Approx. 1.4 kg (3 lb 1 oz) |
| Dimensions (WxHxD) | Approx. 149 x 43 x 225 mm (5 7/8 x 1 3/4 x 8 7/8 inches) |
| **Video** | |
| Video signal | EIA standard, NTSC color |
| Video output | Composite: RCA pin x1, 1.0 Vp-p, 75 Ω, unbalanced, sync negative<br>S-Video: Mini DIN 4-pin x1, Y: 1.0 Vp-p, 75 Ω, sync negative<br>C: 0.286 Vp-p, 75 Ω (subcarrier) |

| Audio | |
|---|---|
| Audio signals | 48 kHz/16-bit, 32 kHz/12-bit,<br>32 kHz/16-bit, 44.1 kHz/16-bit (depending on input signals) |
| Audio output | Phono jacks (L/R) x1, 0.327 V, 47 kΩ load or more, 2.2 kΩ impedance |
| **Others** | |
| | i.LINK (DV In/Out): 4-pin, IEEE1394-based<br>LANC: Stereo mini-mini jack<br>Eject: Monaural mini jack, TTL input, low active (more than 100 ms)<br>DC In: PC standard, 5 V/12 V/GND |
| **Supplied Accessories** | |
| | DV Cable (4-pin - 4-pin, 50 cm) (x1)<br>AV Cable (x1)<br>S-Video Cable (x1)<br>Mounting Screw (x4)<br>Operation Manual (x1) |

# *Flexicart* Multi-cassete System

| General | |
|---|---|
| Power requirements | AC 100/120/220/230/240 V, 50/60 Hz |
| Power consumption | 600 VA (without VTRs) |
| Operating temperature | 5 °C to 35 °C (41 °F to 95 °F) |
| Mass | 250 kg (551 lb 2.5 oz)<br>(without VTRs, cassette bin units and cassettes) |
| Dimensions (WxHxD) | 600 x 1980 x 1090 mm (23 5/8 x 78 x 43 inches) |
| **Connections** | |
| Remote control interface | REMOTE-1: RS-422A D-sub 9-pin<br>REMOTE-2: RS-232C D-sub 25-pin |
| Parallel interface | D-sub 50-pin |
| Reference video In | BNC, Black burst or Composite video |
| Time code In | BNC |
| **Supplied Accessories** | |
| | Power Cable (x1)<br>Operation Manual (x1)<br>Maintenance Manual (x1)<br>Installation Manual (x1) |

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